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Embassy S.P.E. 110
March 2, 1982

YSKOR BEPERK / ISCOR LIMITED

EDITED

GROFPLAAT EN PLATBLOKKE

PLATES AND SLABS

DEPARTMENT OF STATE A/CDC/MR
REVIEWED BY [signature] DATE 3/1/82
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YSKOR BEPERK ISCOR LIMITED

SPZ110

A KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - Spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - Spesifiseer
   (g) Oppervlak-afwerking
   (h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidseekstras/Aftrekkings
3. Massa ekstras (Formule Para. 2.2 - Bl. P1)
4. Wydte en Dikte
5. Vlamsny-plate>32 mm dik
6. Lengte
7. Stutwerk en Stutmaterial Ekstras
8. Kwaliteit
9. Spesiale verwerking/Metallurgiese vereistes
10. Toets en/of Giet-analise-Sertifikate
11. Inspeksie [illegible] woning van Toetse
12. Beperking [illegible] maat/ondermaat
13. Invoerh [illegible] (R10-25/Ton)

C. PWV-GEBIED

Bestaan uit die landdroadistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Bokaburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - Specify
   (g) Surface finish
   (h) End uses

B CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/Deductions
3. Mass extras (Formula Par. 2.2 - Page P1)
4. Width and Thickness
5. Flame Cutting-plates > 32 mm thick
6. Length
7. Shoring and Dunnage Extras
8. Quality
9. Special Processing/Metallurgical requirements
10. Test and/or Cast analyses Certificates
11. Inspection and/or witnessing of Tests
12. Restriction on overage/underage
13. Import Levy (R10-25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Bokuburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

1981-10-01 Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated 1981-07-03

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YSKOR BEPERK ISCOR LIMITED

S.P.E.110

OORVLAKT EN PLATRANDE | **PLATES AND SLABS**

A. **WOORDORDE** | A. **PREFACE**

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E. | 1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. Alle pryse is onderworpe aan 'n verreffeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied. | 2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. Tensy anders bepaal, is alle items onderworpe aan 'n oormaat of ondermaat vervoer bladsy 23, paragraaf 3.6. | 3. Unless ordered to the contrary, all items are subject to 'overgage' or 'undergage' — refer page 23, paragraph 3.6

4. Oorplaat- en Plathlakke word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens teen massa soos gemeet deur die gekte massameter/massameterbrug by the Werke. Enige verwysing na die getal plate op die faktuur of vragbrief is slegs vir inligting. | 4. Plates and Slabs are sold at a price per metric ton (1 000 kilograms) as measured by the scales/mass-meter/mass-meterbridge at the Works. Any reference to the number of plates and slabs on the invoice or consignment note is for information only.

5. Tensy anders vermeld, is oortoe en afwykings hierin gekoppel per metrieke ton. Elke oortoe of afwyking is afsonderlik en uitsluitlik. | 5. Unless otherwise stated, extras and deductions quoted herein are per metric ton. Each extra or deduction is separate and discrete.

6. Normale toetsing en inspeksie soos in die verskillende spesifikasies uiteengesit, word uitgevoer. Wanneer bykomende inspeksie en/of toetsing verlang word, sal 'n oortoe gehef word — verwys bladsye P14 en P15 paragrawe 5.4. | 6. Normal testing and inspection as outlined in the various specifications are carried out. Where additional inspection and/or testing is required, extras will be charged — refer pages P14 and P15 paragraph 5.4.

7. Pryse en oortoe is onderworpe aan verandering sonder kennisgewing. | 7. Prices and extras are chosen ruling on date of dispatch and are subject to change without notice.

8. Wanneer Oorplaat- en/of Plathlakke bestel word, moet hiervan altyd die eindgebruik gespesifiseer. | 8. When ordering Plates and/or Slabs, customers should state the end-use.

9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of opskorings wysig toegestaan word nie, behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die pryse van die gewysigde bestelling voorbehou. | 9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation, in writing. Should an order be modified, the orders so amended, will be re-priced.

10. Met betrekking tot die voorsiening van Gevulkaniseerde en Getempereerde staal word kliënte aangeraai om die Korporasie se brosjures vir raadpleging vir inligting, aangaande minimum buigstraal, sweis- en ander vervaardigingsprosedures. | 10. Regarding the supply of Quenched and Tempered steel customers are advised to consult the Corporation's brochures for information relating to minimum bend radii, welding and other fabricating procedures.

11. Alvorens klasse materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Verwerk in hierdie verband kan 'n nie aanvaarding maak. Die Korporasie skryf geen beproewing/toetsmetode voor nie, maar sodanige metode kan visuele beproewing, eenvoudige dimensionele beproewing, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gepastheid van die aanwending. | 11. Before processing material, customers must ensure that it meets their requirements. Non-acceptance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

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YSKOR BEPERK ISCOR LIMITED

Pt.

S.P.E.- 110

GROEPLAAT EN PLATBLOKKE

A. PRYSE

1. **BASISPRYS:** (Gebaseer op Handels-kwaliteitgroeplaat- en -platblokke).

a) PMV 1) -gebied ..... R329-50 /1 000 kg v.o.e.a. Yskorwerke, Vaalserbiljoen, (Sylvy-1414, Stjilmo) plaat-padvervoer/spoorvervoer.

b) Basis PMV 1) -gebied ... R389-50 /1 000 kg: v.o.e.a. Germiston plaat spoorvervoer.

1) Vervoy-koerantelys par. C

PLATES AND SLABS

1. **BASIS PRICE** (Based on Commercial Quality plates and slabs)

a) PMV 1) area..... R389-50 /1 000 kg f.o.r. Iscor Works, Vaalserbiljoen, (Stilfon-1414, Stjilmo) plate carriage/railage.

b) Carrie PMV 1) area.. R389-50 /1 000 kg: f.o.r. Germiston plate railage.

1) Refer check list par. C

2. **HOEVEELHEIDSTOESLAE/AFTREKKINGS:** (QUANTITY EXTRAS/DEDUCTIONS)

2.1. **TONNEMAATSTOESLAE/AFTREKKINGS**

Die volgende toeslae en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bestelling deur die Kategorie/Afmetingsuitgereik t.o.v. tonnemaat toegewys vir versending na een bestemming soos die die Unster par.

2.1. **TON EXTRAS/DEDUCTIONS**

The following extras and deductions are applicable to the calculated mass of each item on any one consignment order: i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

LENG	EKSTRA/EXTRA	AFTREKKING/DEDUCTION
TOE/TOES	R.c./TON	R.c./TON
1 —<5	73-78	
5 —<10	44-737	
10 —<20	23-63	
15 —<40	11-70	
40 —<80	5-88	
80 —<120	0-88	0-88
120 —<300		3-92
300 —<500		6-08
≥500		11-78

2.1.1. Die minimum bestelhoeveelheid per item sal in een toesendingsmandjie die volgende totale wees.

2.1.1. The minimum quantity per item will be in consignments with the following table.

WYDTE/WIDTH (mm)	DIKTE/THICKNESS (mm)							
	4,5 — 6,0	>6,0 — 8,5	>8,5 — 10,0	>10,0 — 12,0	>12,0 — 15,0	>15,0 — 32,0	>32,0 — 50,0	>50,0
	Ton(e).	Ton(s)	Ton(s)	Ton(s)	Ton(s)	Ton(s)	Ton(s)	Ton(s)
900 — 1200	—	—	—	—	3,6	3,8	4,3	5,3
1200 — 1800	—	—	—	—	4,3	4,8	5,7	6,7
1800 — 3200	2,6	3,4	3,9	4,3	4,3	4,8	5,7	6,7

2.2. **MASSA-SKEYSAE**

Handelskwaliteit-groeplaat/-platblokke moet meer as 4,5 ton elk. Groeplaat/Platblokke in ander kwaliteite as Handelskwaliteit, meer as 3,5 ton elk.

2.2. **MASS EXTRAS**

Commercial Quality Plates/Slabs more than 4,5 ton each. Plates/Slabs in qualities other than Commercial Quality more than 3,5 tons each.

TEORETIESE MASSA GROEPLAAT/ PLATBLOK (TON) THEORETICAL MASS PLATE/ SLAB (TONS)	HANDELSKWALITEIT/ COMMERCIAL QUALITY	ANDER KWALITEITE AS HANDEL KWALITEIT/ QUALITIES OTHER THAN COMMERCIAL QUALITY
	R.c.	R.c.
≥3,5 — 4,5	0-88	28-13
≥4,5 — 5,5	16-93	32-19
(a) ≥5,5 — 6,5	28-98	43-98
(a)(b)≥6,5 — 7,5	35-45	55-70
(a)(b)≥7,5 — 8,5	43-88	67-68
(a)(b)≥8,5 — 9,5	58-48	79-48

(a) Wydtes onder 1 200 mm onderworpe aan bevestiging.

(b) Onderworpe aan bevestiging. Afhanglik van lengte, wydte en/of kwaliteit.

(a). Widths under 1 200 mm subject to confirmation.

(b) Subject to confirmation. Depending on length, width and/or quality.

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GROFPLAAT EN PLATBLOKKE

PLATES AND SLABS

3. GROOTTE EKSTRAS
SIZE EXTRAS

3.1 STANDAARDDIKTE EN -WYDTE-EKSTRAS
Plate 4,5 – 50 mm dik
Platblokke > 50 mm dik

3.1 STANDARD WIDTH AND THICKNESS EXTRAS
Plates 4,5 – 50 mm thick
Slabs > 50 mm thick

STANDAARDDIKTE/ STANDARD THICKNESS (mm)	STANDAARDWYDTES (In trappe van 100 mm) STANDARD WIDTHS (In increments of 100mm)							
	900	1 000–1 100	1 200–1 400	1 500–1 700	1 800	>1 800–2 300	>2 300–2 900	>2 900–3 200
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
4,5	–	–	–	–	–	51–10	–	–
5,0	–	–	–	–	–	34–75	* 45–60	–
6,0	–	–	–	–	–	23–75	* 31–15	–
8,0	–	–	–	–	–	9–10	7–40	23–75
10,0	–	–	–	–	–	5–50	3–50	20–25
12,0	–	–	–	–	–	1–80	0–00	16–35
16,0	36–45	30–15	26–65	20–25	17–40	14–55	12–75	29–20
20,0	36–45	30–15	24–65	26–25	17–40	14–55	12–75	29–20
25,0	49–20	43–00	37–40	32–90	30–15	27–35	25–65	42–05
30,0	62–10	55–70	50–10	45–60	43–00	40–30	38–20	54–85
32,0	62–10	55–70	50–10	45–60	43–00	40–30	38–20	54–85
35,0	62–10	55–70	50–10	45–60	43–00	40–30	38–20	54–85
40,0	64–05	57–40	52–10	47–50	44–70	42–05	40–30	56–60
45,0	66–90	60–15	54–85	50–10	47–50	44–70	43–00	59–35
50,0	70–30	64–05	58–45	53–90	51–10	48–35	46–55	63–00
60,0	77–75	71–25	65–75	61–10	58–45	55–70	53–90	–
70,0	77–75	71–25	65–75	61–10	58–45	55–70	53–90	–
75,0	77–75	71–25	65–75	61–10	58–45	55–70	53–90	–
80,0	77–75	71–25	65–75	61–10	58–45	55–70	53–90	–
90,0	77–75	71–25	65–75	61–10	58–45	55–70	53–90	–
100,0	77–75	71–25	65–75	61–10	58–45	55–70	53–90	–
150,0	77–75	71–25	65–75	61–10	58–45	55–70	53–90	–

o Op platblokke is die nominale wydte beperking 900 mm minimum. Smaller wydtes is onderhewig aan bevestiging. Die hoeveelheid bestel, sal die uitvoerbaarheid van produksie bepaal, asook die spesiale ekstras wat van toepassing is.

Opmerking:–
Plate met die volgende afmetings kan slegs gevlamsny word :–
(i) Plate >32 mm dik.

* Maks. wydte 2500 mm.

o The nominal width limitation for slabs is 900 mm minimum. Narrower widths are subject to confirmation when quantity ordered will determine the feasibility of production and the special extras applicable.

Note:–
Plates with the following dimensions can be flame-cut only :–
(i) Plates >32 mm thick.

* Max. width 2500 mm.

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YSKOR BEPERK ISCOR LIMITED

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GROOTTE-EKSTRAS VIR PLATE EN STRIPE

3. GROOTTE-EKSTRAS (VERVOLG)

SIZE EXTRAS (CONTINUED) PLATES AND STRIPS

3.2. DIK-STANDAARDDIKTE-EKSTRAS
Vir dikte tussen twee standaarddiktes, is die ekstras vir die standaarddikte (par. 3.1, bladsy P2) waarvoor die hoër ekstras geld van toepassing, plus die volgende:-

3.2. NON-STANDARD THICKNESS EXTRAS
For thicknesses between two standard thicknesses the extra for the standard thickness (par.3.1 page P2) bearing the higher extra applies, plus the following:-

DIKTE/THICKNESS	DIK-STANDAARD TRAPPE/ NON-STANDARD INCREMENTS	EKSTRA/ EXTRA
4,5 – 12 mm >12,0 – 50 mm	0,5 mm 0,5 mm 1 mm	R.e. 11-65 24-25 11-65
>50 mm	5 mm (Standaard trappe/Standard increments: 10 mm)	8-20

3.3. WYD-STANDAARDWYDTE-EKSTRAS
Vir wydtes tussen twee standaardwydtes, is die ekstras vir die standaardwydte (par. 3.1, bladsy P2) waarvoor die hoër ekstras geld van toepassing, plus die volgende:-

3.3. NON-STANDARD WIDTH EXTRAS
For widths between two standard widths, the extra for the standard width (par. 3.1 page P2) bearing the higher extra applies, plus the following:-

PLAAT/PLATE	PLATMUUR/SLABS
STANDAARD TRAPPE/100 mm:	STANDARD INCREMENTS/100 mm
Wyd-standaard-trappe – 5 mm ... R8-20 Non-standard increments – 5 mm	Wyd-standaard-trappe – 25 mm ... R8-20 Non-standard increments – 25 mm

3.4. VLAKHEIDS-EKSTRAS: (Kode 2021):
(Koolstofinhoud 0,33% maksimum)
Prys per 1 meter van omtrek

3.4. FLATNESS-CRITERIA EXTRAS (Code 2021)
(Carbon content 0,33% maximum)
Price per 1 metre of perimeter

DIKTE/ THICKNESS (mm)					
<35	35 – <50	50 – <75	75 – <100	100 – <125	>125 – 150
R.e.	R.e.	R.e.	R.e.	R.e.	R.e.
2-35	2-70	3-35	4-40	5-45	6-90

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PLATES AND SLABS

3. GROOTTE-EKSTRAS (VERVOLG)
SIZE EXTRAS (CONTINUED)

3.5 STANDAARDLENGTE-EKSTRAS (Grofplaat en Platblokke)

3.5 STANDARD LENGTH (Plates and Slabs)

LENGTE m (IN TRAPPE VAN 100 mm)	EKSTRA
LENGTH m (BY INCREMENTS OF 100 mm)	EXTRA
	R.c.
1,0 - ≤ 1,8	18-35
1,8	11-00
> 1,8 - ≤ 2,0	14-55
2,0	7-40
> 2,0 - ≤ 2,4	11-00
2,4	3-50
> 2,4 - ≤ 3,0	7-40
3,0	1-80
> 3,0 - ≤ 6,0	3-50
6,0 - 10,0	0-00
> 10,0 - 13,0	11-00
(a) > 13,0 - 15,0	27-35
(a) > 15,0 - 17,0	49-20
(a) > 17,0 - 21,0	72-95
> 21,0	Op aansoek / On application

(a) > 13,8 m onderworpe aan bevestiging.

(a) > 13,8 m subject to confirmation.

3.6 NIE-STANDAARDLENGTE-EKSTRAS
(Trappe - 25 mm)

Vir ander lengtes as in gelyke trappe van 100 mm is die standaardlengte-ekstras (Par. 3.5 hierbo) van toepassing, plus R3-50

3.6 NON-STANDARD LENGTH
(Increments - 25 mm)

For lengths other than in increments of 100 mm the standard length extras (Par. 3.5 above) apply plus R3-50

3.7 STUIWERK EN STU-MATERIAAL-EKSTRAS (KODE 2655)

Die volgende ekstras sal gehef word vir Stu-materiaal en Stuiwerk vir wye en lang plate wat per spoor versend word.

3.7 SHORING AND DUNNAGE EXTRAS (CODE 2655)

The following extras will apply for Dunnage and Shoring of wide and long plates despatched by rail.

PER ITEM TON	PLATE > 2440 - ≤ 2500 mm WYD EN ≤ 12,7 m LANK IN DZ-TIPE TROKKE				PLATE > 2500 mm WYD EN ≤ 12,7 m LANK IN DZ-TIPE TROKKE				PLATE ≤ 2325 mm WYD > 13,8 m LANK IN DA-TIPE TROKKE	PLATE > 2325 mm WYD > 12,7 m LANK IN DA-TIPE TROKKE
PER ITEM TONS	PLATES > 2440 - ≤ 2500 mm WIDE AND ≤ 12,7 m LONG IN DZ-TYPE TRUCKS				PLATES > 2500 mm WIDE AND ≤ 12,7 m LONG IN DZ-TYPE TRUCKS				PLATES ≤ 2325 mm WIDE > 13,8 m LONG IN DA-TYPE TRUCKS	PLATES > 2325 mm WIDE > 12,7 m LONG IN DA-TYPE TRUCKS
	LENGTE/LENGTH (m)				LENGTE/LENGTH (m)				LENGTE/LENGTH (m)	LENGTE/LENGTH (m)
	> 2,4 -4,0	> 4,0 -6,0	> 6,0 -9,5	> 9,5 -12,7	> 2,4 -4,0	> 4,0 -6,0	> 6,0 -9,5	> 9,5 -12,7	> 13,8	> 12,7
≤ 1	R.c.	R.c. Op aansoek	R.c.	R.c.	R.c.	R.c. On application	R.c.	R.c.	R.c. -	R.c. -
> 1 - 2	76-85	76-85	109-60	157-30	91-40	91-40	138-90	175-40	109-60	146-15
> 2 - 3	47-50	47-50	65-75	98-80	58-45	58-45	84-30	113-45	65-75	87-80
> 3 - 4	32-90	32-90	47-50	65-75	40-30	40-30	58-45	84-30	47-50	62-10
> 4 - 5	25-65	25-65	36-45	54-85	29-20	29-20	47-50	65-75	36-45	51-10
> 5 -10	14-55	14-55	21-85	29-20	21-85	21-85	29-20	40-30	21-85	29-20
>10 -20	13-75	13-75	17-40	14-55	18-35	18-35	21-85	18-35	11-00	14-55
>20 -30	11-80	11-00	12-75	12-75	14-55	14-55	17-40	14-55	9-10	12-75
>30	11-00	9-10	9-10	9-10	13-75	12-75	11-00	11-00	7-40	11-00

Opmerking:

(i) Klante word daaraan herinner dat bykomende vervoerkoste deur die S.A.S. gehef word vir ekstra groot plate, wat sowel lengte as wydte betref. Hierdie koste is vir die klant se rekening.

(ii) Versending van sulke plate sal afhanklik wees van die beskikbaarheid van spesiale S.A.S.-trokke.

Notes:

(i) Customers are reminded that additional transport charges are raised by the S.A.R. for extra large plates, both as regards length and width. These charges are for the customer's account.

(ii) Dispatch of such plates depends on the availability of special S.A.R. trucks.

GEDEKLASSIFIEER

YSKOR BEPERK ISCOR LIMITED

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PLATE AND SLABS

4. KWALITEITSOORSIGTLYS
QUALITY EXTRAS

(Aangeduide analises is gietpotanalises) (Indicated analyses are ladle analyses)

4.1 COMMERCIAL QUALITIES

KODE CODE		EKSTRA EXTRA R.c.
123	Handelskwaliteit (C 0,33% Maks.)/Commercial Quality (C 0,33% Max.) Sertifisering/Certification (Indien benodig/if required)	0-00
2003 of/or 2005	Analise-Sertifikaat/Analysis Certificate) Soos SPEL10 bl. P14 par.5.3) As per SPEL10. P14 par.5.3	
099	Analise- en Toetssertifikaat/Analysis and Test Certificate) KAR/AISI 1010 (C0,08 - 0,13% Mn 0,30 - 0,60% P/0,040% S0,050% maksimum	9-53

4.2. KOOLSTOFSTAAL 4.2. CARBON STEEL

KODE KODE		EKSTRA EXTRA R.c.
109	Ploegbeitelstaal - SS10/44 - C 0,75/0,90% Mn 0,60/0,80% (Min. 20 ton(s) per item) Plough Disc Steel	111-25
2173	Sertifisering/Certification (Indien benodig/if required) Analise-Sertifikaat/Analysis Certificate	0-00
268	Ploegbeitelstaal - SS10/AS - C 0,60/0,75% Mn 0,60/0,75% (Min. 20 ton(s). per item) Plough Share Steel	103-75
2173	Sertifisering/Certification (Indien benodig/if required) Analise-Sertifikaat/Analysis Certificate	0-00
107	Slytheestaande Plaat/Hard Wearing Plate - SS10/200 - C 0,40/0,55% Mn 0,70/1,00%	98-63
2173	Sertifisering/Certification (Indien benodig/if required) Analise-Sertifikaat/Analysis Certificate	0-00
433	SS970 PART 1 - 080 M40 (SLEGS ANALISE/ANALYSIS ONLY)	134-75
2173	Sertifisering/Certification (Indien benodig/if required) Analise-Sertifikaat/Analysis Certificate Verwys Bladsy 56 par.7/Refer Page 56 par.7	0-00
436	SS970 PART 1 - 070 M55 (SLEGS ANALISE/ANALYSIS ONLY)	109-75
2173	Sertifisering/Certification (Indien benodig/if required) Analise-Sertifikaat/Analysis Certificate Verwys Bladsy 56 par.7/Refer Page 56 par.7	0-00
435	SS970 PART 1 - 150 M28 (FYNKORREL - SLEGS ANALISE/FINE GRAIN ANALYSES ONLY)	141-25
2173	Sertifisering/Certification (Indien benodig/if required) Analise-Sertifikaat/Analysis Certificate Aanbeveelde eindgebruik/Recommended end use: Staal vir warm-bewyding, ongelaagde/Steel for hot friction saw-blades	0-00

4.3. STRUKTURELE KWALITEITE 4.3. STRUCTURAL QUALITIES

KODE CODE		EKSTRA EXTRA R.c.
512	CMEF Simbool R/F bel. 8 (4,5 - 6 mm dik/thick) Koper (0,20 - 0,35%) verpligtend/Copper (0,20 - 0,35%) mandatory	38-75
511	CMEF Simbool R/Symbol R (06 - 100 mm dik/thick)	7-50
	A. Sertifisering/Certification Analise- en toets-sertifikaat word voorsien. (Moet nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order).	
	B. Bykomende Eienskappe/Additional Extras	
3313	Bywerking van magnetiese toetse deur S.A.S. (verpligtend)/ Machining of mechanical tests by S.A.R. (mandatory)	2-10
227	BS4360 Grade 40A Sertifisering/Certification Analise- en toets-sertifikaat word voorsien. (Moet nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	6-50
202	BS4360 Grade 43 A/1 Sertifisering/Certification Analise- en toets-sertifikaat word voorsien. (Moet nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	6-50
186	BS4360 Grade 43 A Sertifisering/Certification Analise- en toets-sertifikaat word voorsien. (Moet nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	7-50

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PLATES AND SLABS

4. KWALITEITSEKSTRAS (VERVOLG) / QUALITY EXTRAS (CONTINUED)

4.3 STRUKTUUR KWALITEITE (vervolg) / STRUCTURAL QUALITIES (continued)

KODE CODE		EKSTRA EXTRA R.c.
288	BS4360 Grade 43 B A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order) B. Bykomende Ekstra/Additional Extra	25-50
3897	Slagtoetse word nie benodig nie/Impact tests not required	0-00
3128	Slagtoetse /Impact tests (RT – 20Deg. C) Opmerking: Diktes > 50 mm – slegs op aansoek/ Note: Thicknesses > 50 mm – on application only.	4-25
261	BS4360 Grade 43 C A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order) B. Bykomende Ekstra/Additional Extra Slagtoetse verpligtend/Impact tests mandatory (Klant moet temperatuur spesifiseer/Customer to specify temperature) Temperature/Temperatures	36-75
3235	LT0 (0° C.) Opmerking: Diktes > 50 mm – slegs op aansoek/ Note: Thicknesses > 50 mm – on application only.	5-75
203	BS4360 Grade 50 B: ≤ 12,5 mm > 12,5 mm A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order) Opmerking: Diktes 100 mm – slegs op aansoek/ Note: Thicknesses 100 mm – on application only.	77-00 110-00
194	BS4360 Grade 50 C: ≤ 12,5 mm > 12,5 mm A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order) B. Bykomende Ekstra/Additional Extra Slagtoetse verpligtend/Impact tests mandatory (Klant moet temperatuur spesifiseer/Customer to specify temperature) Temperature/Temperatures	77-00 110-00
3237	LT5 (– 5° C.)	5-75
3241	LT15 (– 15° C.) Opmerking: Diktes > 75 mm – slegs op aansoek/ Note: Thicknesses > 75 mm – on application only.	5-75

4.4 STRUKTUUR KWALITEITE (KOPERBOUDEND) / STRUCTURAL QUALITIES (COPPER BEARING)

KODE CODE		EKSTRA EXTRA R.c.
073	BS4360 Grade 40 A (Cu. 0,20 – 0,35%) Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	37-50
279	BS4360 Grade 43 A/1 (Cu. 0,20 – 0,35%) Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	37-50
228	BS4360 Grade 43 A (Cu. 0,20 – 0,35%) Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	38-75

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CHEMPLAAT EN PLATBLOKKE: PLATES AND SLABS

4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.5 SKEEPSPLAAT KWALITEIT 4.5 SHIPPLATE QUALITIES

KODE CODE		EKSTRA EXTRA Rand
126	Lloyds Register of Shipping Grade A (Minimum dik/Minimum thickness 50 mm)	10-25
119	ABS Grade A (" " " " 50 mm)	10-25
411	ABS Grade B (" " " " 50 mm).	24-25
	A. Bykomende Ekstras/Additional Extras:	
3309/	Bywoning van ongelaaste toetse deur (a) Lloyds opsiener (verpligtend)	4-70
1314	(b) ABS opsiener (verpligtend)	4-25
3300	Witnessing of mechanical tests by (a) Lloyds surveyor (mandatory)	4-70
3314	(b) ABS surveyor (mandatory)	4-25
	B. Sertifisering/Certification:	
	Analise en toets: sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificate will be supplied (need not be specified on order)	
	C. Slagproetser: Vom toepassing op material > 25 mm vir ABS Grade B/	
	Impact tests: Applicable to material > 25 mm for ABS Grade B	
3235	LNG (0°C) oorlangs/longitudinal	5-75
2787	LNG (0°C) dwars/transverse	11-75

4.6 VERBETERDE WEERSTANDBIEDENDE STAAL 4.6 WEATHER RESISTANT STEEL

KODE CODE		EKSTRA EXTRA Rand
128	*Cor-Ten Grade A (a)	175-25
	Sertifisering/Certification:	
	Analise en toets: sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificate will be supplied (need not be specified on order)	
302	*Cor-Ten Grade A-P (a)	234-98
	Sertifisering/Certification:	
	Analise en toets: sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificate will be supplied (need not be specified on order)	
	(Negatiewe afwykings soos vir Cor-Ten Grade A toegelaat word/)	
	(Negative deviations as for Cor-Ten Grade A allowed/)	
394	*SSA360 Grade WR 50 A1 (a)	173-25
	Sertifisering/Certification:	
	Analise en toets: sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificate will be supplied (need not be specified on order)	
123	**Cor-Ten Grade C (a) (b)	179-00
	Sertifisering/Certification:	
	Analise en toets: sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificate will be supplied (need not be specified on order)	
395	**SSA360 Grade WR 50 A1 (a) (b)	179-00
	Sertifisering/Certification:	
	Analise en toets: sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificates will be supplied (need not be specified on order)	
	(a) Max. 10 ton/ ^{2}mm. per item.	
	(b) PLATE kan slegs geoksideerde word toe: 'n dikte van $\leq$25mm. Platen > 15mm dik kan ook gesnyde gewalsrand word/	
	PLATES can only be ordered up to a thickness of $\leq$25mm. Plates > 15mm thick can be flamecut to size:	
	Slagte $\leq$12,7 mm $\leq$12,7 mm only	
	" >12,7 mm " >12,7 mm	

4.7 PYPSTAAL KWALITEIT 4.7 PIPE STEEL QUALITIES

KODE CODE		EKSTRA EXTRA Rand
001	API 5L Grade A	16-50
002	API 5L Grade B	16-50
	Sertifisering/Certification:	
	Analise en toets: sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificate will be supplied (need not be specified on order)	

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GROFPLAAT EN PLATBLOKKE

PLATES AND SLABS

4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.8 KETEL EN DRUKHOUER KWALITEITE
4.8.1 BS Spesifikasies

4.8 BOILER AND PRESSURE VESSEL QUALITIES
4.8.1 BS Specifications

KODE CODE		EKSTRA EXTRA R/t. >40 mm	EKSTRA EXTRA R/t ≤40 mm
	BS 1501 GRADE A		
617	BS 1501/151 GRADE 400 A	115-50	52-25
618	BS 1501/151 GRADE 430 A	115-50	52-25
619	BS 1501/161 GRADE 400 A		115-50
620	BS 1501/161 GRADE 430 A		115-50
621	BS 1501/164 GRADE 400 A		139-25
622	BS 1501/223 GRADE 460 A		147-75
623	BS 1501/223 GRADE 490 A		158-25
624	BS 1501/224 GRADE 430 A		144-50
625	BS 1501/224 GRADE 460 A		152-50
626	BS 1501/224 GRADE 490 A		163-25
	BS 1501 GRADE B		
627	BS 1501/151 GRADE 400 B	120-75	57-50
628	BS 1501/151 GRADE 430 B	120-75	57-50
629	BS 1501/161 GRADE 400 B		120-75
630	BS 1501/161 GRADE 430 B		120-75
631	BS 1501/164 GRADE 400 B		144-50
632	BS 1501/223 GRADE 460 B		153-00
633	BS 1501/223 GRADE 490 B		163-50
634	BS 1501/224 GRADE 430 B		149-75
635	BS 1501/224 GRADE 460 B		157-75
636	BS 1501/224 GRADE 490 B		168-50

A. SERTIFISERING:
Analise en toets sertifikaat word voorsien (Hoef nie op bestelling gespesifiseer te word.)

B. KWALITEITSVERSEKERING

1. Standaard Praktyk – Hoef nie op bestelling gespesifiseer te word nie.

1.1 Ultrasoniese toetsing volgens BSI DD21/1972 GRADE C+3:
Van toepassing op alle bogenoemde spesifikasies/grade in diktes 20 mm en dikker.

OPMERKING:
Ander Ultrasoniese Toets Standaarde – slegs op aansoek.

1.2 Vakuum Boog Ontgassing: S. 0,01% maks.
Van toepassing op alle diktes vir –
BS1501/161)
BS1501/164) ALLE GRADE/ALL GRADES
BS1501/223)
BS1501/224)

A. CERTIFICATION:
Analysis and test certificate will be supplied (need not be specified on order)

B. QUALITY ASSURANCE

1. Standard Practice – Need not be specified on order

1.1 Ultrasonic testing to BSI DD21/1972 GRADE C+3:
Applicable to all above specifications/grades in thicknesses 20 mm and thicker.

NOTE:
Other Ultrasonic Test Standards – On application only.

1.2 Vacuum Arc Degassing: S. 0,01% max. Applicable to all thicknesses for –

C. BYKOMENDE EKSTRAS/ADDITIONAL EXTRAS

1. PRODUK EN TOETSSTUKTOESTAND/PRODUCT AND TEST PIECE CONDITION:

2288*	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals" Product condition "as rolled" with test piece condition "as rolled"	0-00
2711*	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals en gesimuleerd na sweis hittebehandel" (BS 1501)/ Product condition "as rolled" with test piece condition "as rolled and simulated P.W.H.T." (BS 1501)	1-25
	* Slegs van toepassing op BS 1501/151 en BS 1501/161 in diktes ≤40mm/ Only applicable to BS 1501/151 and BS 1501/161 in thicknesses ≤40mm	
2282	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd"/ Product condition "normalised" with test piece condition "normalised"	59-00
2709	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd en gesimuleerd na sweis hittebehandeling" (BS 1501)/ Product condition "normalised" with test piece condition "normalised and simulated P.W.H.T." (BS 1501)	60-25
2289*	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd"/ Product condition "as rolled" with test piece condition "normalised"	1-25
2715*	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd en gesimuleerd na sweis hittebehandeling" (BS 1501)/ Product condition "as rolled" with test piece condition "normalised and simulated P.W.H.T." (BS 1501)	2-50

* Nie van toepassing op BS 1501/223 – alle grade
Not applicable to BS 1501/223 – all grades
* Klant is verantwoordelik vir normalisering van plate/
Customer is responsible for normalising of plates

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GROEPLAAT EN PLATVLOERS — PLATES AND SLABS

4. KWALITEITSEKSTRAS (Vervolg) — QUALITY EXTRAS (CONTINUED)

4.8 KETEL EN DRUKHOUER KWALITEITE (Vervolg) — 4.8 BOILER AND PRESSURE VESSEL QUALITIES (Continued)

4.8.1 BS Spesifikasies (Vervolg) — 4.8.1 BS Specifications (Continued)

KODE CODE		EKSTRA/ EXTRA R.c.
	C. BYKOMENDE EKSTRAS/ADDITIONAL EXTRAS (Vervolg/Continued)	
	2. OORLANGSE "V KEEP" SLAGTOETSE/LONGITUDINAL "V NOTCH" IMPACT TESTS (Indien gespesifiseer/If specified)	
	TEMPERATUUR/TEMPERATURES:	
3219	RT (20°C)) BS:1501/164; BS:1501/223; BS:1501/224.	11-73
3216	LT0 (0°C))	11-73
3242	LT15 (-15°C) — BS:1501/223	15-38
3244	LT20 (-20°C) — BS:1501/164; BS:1501/224	13-38
3246	LT30 (-30°C) — BS:1501/223; BS:1501/224.	13-38
3248	LT40 (-40°C)) BS:1501/224	15-38
3250	LT50 (-50°C))	15-38
	OPMERKINGS: (a) Klaas asook temperatuur spesifiseer	
	(b) Slagtoetswaardes vir materiaal >63 mm dik — slegs op aanvraag	
	NOTES: (a) Customer to specify temperature	
	(b) Impact values for material >63 mm thick — on application only	
3.	WARM/HOT TESTING	
	(Slegs van toepassing op Grade B plate/Only applicable to Grade B plates)	
	Indien sertifikate van hoogtemperatuur-eienskappe (warmtoetse) deur die klaarmaker word, moet dit, asook die temperatuur en die toetsfrekwensie op die bestelling gespesifiseer word/	
	If verification of elevated temperature properties (hot tests) are required by the customer it must be specified on the order as well as the temperature and frequency of testing.	
	TEMPERATURE/TEMPERATURES (Die volgende word voorgestel/The following are suggested)	
3272	Toets/At: 150°C	7-68
3273	Toets/At: 200°C	7-68
3275	Toets/At: 250°C	7-68
2314	Toets/At: 300°C	7-68
2184	Toets/At: 350°C	7-68
3234	Toets/At: 400°C	7-68
	OPMERKINGS/Warmtoetsings: Toets ander temperature — slegs op aanvraag	
	NOTE: Hot testing to other temperatures — on application only	
	* Hierdie toetsfrekwensie is voor toepassing/Indien die frekwensie van toetse in ooreenstemming is met die Werke standaard. Dit is "een toetsstuk van elk van die twee dikste plate van elke 25 ton of gedeelte daarvan van dieselfde giet". Enige afwyking van bogenoemde standaard is onderworpe aan navraag en prysbepaling/	
	* This extra applies if the frequency of tests are in accordance with the Works standard. It is "one test piece from each of the two thickest plates in each 25 tons or part thereof from the same cast." Any deviation from the above standard is subject to enquiry and price determination.	

4.8.2 A.S.T.M. KETEL EN DRUKHOUER SPESIFIKASIES — 4.8.2 A.S.T.M. BOILER AND PRESSURE VESSEL SPECIFICATIONS

KODE/ CODE		EKSTRA EXTRA R.c.
023	ASTM A285. GRC.	22-73
014	ASTM A515 GR 60	123-73
017	ASTM A515 GR 65	123-73
021	ASTM A515 GR 70	123-73
	A. SERTIFISERING: Analise van toets sertifikaat word voorsien. (Moet nie op bestelling gespesifiseer te word.)	A. CERTIFICATION: Analysis and tests certificate will be supplied. (need not be specified on order)
	B. KWALITEITVERSEKERING.	B. QUALITY ASSURANCE
1.	Standaard Praktyk — Moet nie op bestelling gespesifiseer te word nie.	1. Standard Practice — Need not be specified on order
1.1	Ultrasoniese toetsing volgens SABS 0021/1972 GRADE C+3: Van toepassing op alle bogenoemde spesifikasie/ gredes in dikte >10 mm en dikker.	1.1 Ultrasonic testing to SABS 0021/1972 GRADE C+3: Applicable to all above specifications/grades in thicknesses >10 mm and thicker.
	OPMERKING: Ander Ultrasoniese Toets Standaarde — slegs op aanvraag.	NOTE: Other Ultrasonic Test Standards — On application only.
1.2	Tekstuur Rooig: Ontgassings ± 0,01% maks. Van toepassing op alle dikte.	1.2 Vacuume Arc Degassing: ± 0,01% max. Applicable to all thicknesses.

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4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.8 KETEL EN DRUKHOUER KWALITEITE (Vervolg) 4.8 BOILER AND PRESSURE VESSEL QUALITIES (Continued)
4.8.2 A.S.T.M. KETEL EN DRUKHOUER SPESIFIKASIES 4.8.2 A.S.T.M. BOILER AND PRESSURE VESSEL SPECIFICATIONS

KODE/ CODE		EKSTRA EXTRA R.c.
	C. BYKOMENDE EKSTRAS/ADDITIONAL EXTRAS	
	1. PRODUK EN TOETSSTUKTOESTAND/PRODUCT AND TEST PIECE CONDITION:	
2288	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals" Product condition "as rolled" with test piece condition "as rolled"	0-00
2280*	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals en spanningsverlig"/ Product condition "as rolled" with test piece condition "as rolled and stress relieved"	1-25
2282	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd"/ Product condition "normalised" with test piece condition "normalised"	59-00
2287*	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd en spanningsverlig"/ Product condition "normalised" with test piece condition "normalised and stress relieved"	60-25
2286*°	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd en spanningsverlig"/ Product condition "as rolled" with test piece condition "normalised and stress relieved"	2-50
2289°	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd"/ Product condition "as rolled" with test piece condition "normalised".	1-25
	* Spanningsverligting van toetsstukke sal uitgevoer word in ooreenstemming met ASTM A20,S16 * Stress relieving of test pieces will be carried out in accordance with ASTM A20,S16 ° Klant is verantwoordelik vir normalisering van plate/ ° Customer is responsible for normalising of plates.	
	Ander bykomende vereistes - slegs op aansoek/ Other supplementary requirements - on application only.	
346	ASTM A516 GR 60	146-50
277	ASTM A516 GR 65	146-50
058	ASTM A516 GR 70	165-00
	A. SERTIFISERING: Analise- en toets sertifikaat word voorsien (Hoef nie op bestelling gespesifiseer te word.)	A. CERTIFICATION: Analysis and test certificate will be supplied (need not be specified on order)
	B. KWALITEITSVERSEKERING	B. QUALITY ASSURANCE
	1. Standaard Praktyk - Hoef nie op bestelling gespesifiseer te word nie.	1. Standard Practice - Need not be specified on order
	1.1 Ultrasoniese toetsing volgens BSI DD21/1972 GRADE C+3: Van toepassing op alle bogenoemde spesifikasies/grade in diktes 20 mm en dikker.	1.1 Ultrasonic testing to BSI DD21/1972 GRADE C+3: Applicable to all above specifications/grades in thicknesses 20 mm and thicker.
	OPMERKING: Ander Ultrasoniese Toets Standaarde - slegs op aansoek.	NOTE: Other Ultrasonic Test Standards - On application only.
	1.2 Vakuum Boog Ontgassing: S. 0,01% maks. Van toepassing op alle diktes.	1.2 Vacuum Arc Degassing: S. 0,01% max. Applicable to all thicknesses
	C. BYKOMENDE EKSTRAS/ADDITIONAL EXTRAS	
	1. PRODUK EN TOETSSTUKTOESTAND/PRODUCT AND TEST PIECE CONDITION:	
2288	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals" Product condition "as rolled" with test piece condition "as rolled"	0-00
2280*	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals en spanningsverlig Product condition "as rolled" with test piece condition "as rolled and stress relieved	1-25
2282	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd"/ Product condition "normalised" with test piece condition "normalised"	59-00
2287*	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd en spanningsverlig"/ Product condition "normalised" with test piece condition "normalised and stress relieved"	60-25
2286*°	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd en spanningsverlig"/ Product condition "as rolled" with test piece condition "normalised and stress relieved"	2-50
2289°	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd"/ Product condition "as rolled" with test piece condition "normalised".	1-25
	* Spanningsverligting van toetsstukke sal uitgevoer word in ooreenstemming met ASTM A20,S16 * Stress relieving of test pieces will be carried out in accordance with ASTM A20,S16 ° Klant is verantwoordelik vir normalisering van plate/ ° Customer is responsible for normalising of plates.	
	Ander bykomende vereistes - slegs op aansoek/ Other supplementary requirements - on application only.	

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GROFPLAAT EN PLATWAARE — **PLATES AND STARS**

4. KWALITEITSEKSTRAS (VERVOLG) — **QUALITY EXTRAS (CONTINUED)**

4.8 **EKSTRA EN ONDERHOUE KWALITEITE (Vervolg)** — 4.8 **BOILER AND PRESSURE VESSEL QUALITIES (Continued)**

4.8.3 **Ander Spesifikasies** — 4.8.3 **Other Specifications**

KODE/ CODE		EKSTRA/ EXTRA R.e.
309-	CME 9 Simbool 6/Symbol 6	53-75
320-	CME 9 Simbool 10/Symbol 10	53-75
	A- Sertifisering/Certification:	
	Analise- en toetssertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word)	
	Analysis and test certificate will be supplied (need not be specified on order)	
	B- Bykomende ekstra/Additional extra:	
2312	Sywising van magnetiese toetse deur S.A.B. (verpligtend)/	2-18
	Witnessing of mechanical tests by S.A.B. (mandatory)	
3329	Oppervlak inspeksie deur S.A.B. (verpligtend)	4-23
	Surface inspection by S.A.B. (mandatory)	

4.9- **KWALITEITE VIR SPESIALE AANWENDING** — 4.9 **SPECIAL PURPOSE QUALITIES**

KODE/ CODE		EKSTRA/ EXTRA R.e.
103	Staal vir verzinkingsbaddens (aluminium gedem)	79-23
	Galvanising bath steel (aluminium killed)	
	A- Sertifisering/Certification (indien benodig/if required)	
2173	Analise-sertifikaat/Analysis certificate	0-00
	B- Kwaliteitsversekering/Quality assurance	
	1- Standaard: praktyk/Standard practice:	
	Hoef nie op bestelling gespesifiseer te word/Need not be specified on order:	
	2- Ultrasoniese toetsing — volgens S.A.B.T. SNV 21/1972 Grade C+5 — alle diktes:	
	Ultrasonic testing — to S.A.B.T. NB 21/1972 Grade C+5 — all thicknesses:	
090-	ASTM A/A 1955 EN 3A. (fynkorrel/fine grain).	158-00
	A- SERTIFISERING:	A- CERTIFICATION:
	Analise- en toets-sertifikaat word voorsien:	Analysis and test certificate will be
	(Hoef nie op bestelling gespesifiseer te word.)	supplied: (need not be specified on order)
	B- KWALITEITSVERSEKERING	B- QUALITY ASSURANCE
	1- Standaard: Praktyk — Hoef nie op bestelling	1- Standard: Practice — Need not be
	gespesifiseer te word nie:	specified on order:
	1.1- Ultrasoniese toetsing volgens:	1.1 Ultrasonic testing to:
	SABT 0021/1972 GRADE C+5:	SABT 0021/1972 GRADE C+5:
	Van toepassing op alle bogenoemde spesifikasies/	Applicable to all above
	grade in diktes 20 mm en dikker.	specifications/grades in
		thicknesses 20 mm and thicker.
	OPMERKING:	NOTE:
	Ander Ultrasoniese Toetsstandaarde — slegs op	Other Ultrasonic Test Standards —
	aanvraag.	On application only.
	1.2 Vakuum Deegoksygen: ± 0,01% maks.	1.2 Vacuum Arc Degassing: ± 0,01%
	Van toepassing op alle diktes.	max. Applicable to all
		thicknesses.
	C- Bykomende ekstras/Additional extras:	
	Produk en toetsmonsterstand/Product and test piece condition:	
2252-	Produkmonsterstand "genormaliseerd" met toetsmonsterstand "genormaliseerd"	39-00
	Product condition "normalised" with test piece condition "normalised"	
2289-	Produkmonsterstand "soos gewals" met toetsmonsterstand "genormaliseerd"	1-23
	Product condition "as rolled" with test piece condition "normalised"	
6-	Klandisie verantwoordelik vir normalisering van plate/	
	Customer is responsible for normalising of plates:	
	OPMERKING: Die spesifikasie maak slegs voorsiening vir diktes ≤ 80 mm. Vir plate > 80 mm	
	dik sal treksterkte verminder tot 402 MPa minimum/	
	NOTE: The specification only provides for thicknesses ≤ 80 mm. For plates > 80 mm	
	thick the tensile strength is reduced to 402 MPa minimum.	

5. SPESIALE VERWERKINGS/METAALFISIESE VEREISTES/
SPECIAL PROCESSING/METALLURGICAL REQUIREMENTS

5.1 **VERWERKINGSEKSTRAS:** — 5.1 **PROCESSING EXTRAS**
(SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER) — (APPLICABLE ONLY IF SPECIFIED ON ORDER)

KODE/ CODE			EKSTRAS/ EXTRAS
2083-	5.1.1 Normalisering (Indien spesifikasie nie daarvoor voorsiening maak nie)	5.1.2 Normalising (If not provided for by specification)	R.e. 39-00
	Grootteberyking/Size limitation:	Lengte/Length	
	Dikte/Thickness 6 – 150 mm	2,0 – 13,0 m (maks/max)	
	Wydte/Width	Dikte/Thickness	
	Maks/Max:		
	2400 mm	< 8 mm	
	2400 mm	8 – <10 mm	
	2500 mm	10 – <12 mm	
	3050 mm	≥ 12 mm	

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PLATES AND SLABS

5. SPESIALE VERWERKINGS/METALLURGIESE VEREISTES
SPECIAL PROCESSING/METALLURGICAL REQUIREMENTS

5.1 VERWERKINGSEKSTRAS (Vervolg) / PROCESSING EXTRAS (Continued)

(SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER) / (APPLICABLE ONLY IF SPECIFIED ON ORDER)

KODE CODE			EKSTRAS/ EXTRAS
2475	5.1.2 Beperkte Dikte/Massa Toleransie Walsing tot 'n kleiner massa-toleransie uitgedruk as persentasie, maar n is kleiner as 75% van normale toleransie nie, verwys bladsy S2, par. 3.1	5.1.2 Restricted Thickness Mass Tolerance Rolling to a closer mass tolerance expressed in percentage but not more restrictive than 75% of normal tolerance, refer page S2, par. 3.1	R.c. 11-95
2771	5.1.3 Beperkte Platheidstoleransie Vir platheidstoleransie van 50% minder as normale toleransie (verwys bladsy S3 par. 3.3)	5.1.3 Restricted Flatness Tolerance For flatness tolerance of 50% less than normal tolerance (refer page S3 par. 3.3)	11-95

5.2 METALLURGIESE EKSTRAS / METALLURGICAL EXTRAS

5.2.1 Ultrasoniese Toetse / Ultrasonic Testing

Ultrasoniese toetse sal t.o.v. grofplaat en platblokke (12 tot 150 mm dik) in beperkte tonnemaat deur die Korporasie ondernees word volgens B.S.I. DD 21/1972 gedateer Oktober 1972 soos aangedui in die volgende tabelle:

Ultrasonic Testing of limited tonnages of plates and slabs (12 to 150 mm (thick) will be undertaken by the Corporation in terms of B.S.I. DD 21/1972 dated October 1972 as per the following tables:

(a) <12 mm en >150 mm op aansoek
Toetsing laminêre gebreke en Onsuiwerheidsaggregate

(a) <12 mm and >150 mm on application
Testing Laminar Defects and Inclusion Clusters

INDIVIDUELE PLAAT MASSA/ INDIVIDUAL PLATE MASS	EKSTRA/EXTRA PER TON	
	C + 1 (2237)	C + 3 (2875)
≤4 ton/s	R71-40	R47-50
>4 ton/s	R81-80	R58-45

(b) Randtoetse alleen (2656) / (b) Edge testing only (2656)

INDIVIDUELE PLAAT MASSA / INDIVIDUAL PLATE MASS	GRAAD E / GRADE E EKSTRA/EXTRA PER TON
≤4 ton/s	R47-50
>4 ton/s	R58-45

(c) Toetsing vir Laminêre gebreke, Onsuiwerheidsaggregate en Randtoetse

(c) Testing of Laminar Defects, Inclusion Clusters and Edge Testing

INDIVIDUELE PLAAT MASSA/ INDIVIDUAL PLATE MASS	EKSTRA/EXTRA PER TON C + 3 + E (2876)
≤4 ton/s	R77-45
>4 ton/s	R87-30

OPMERKING:
(i) Ander toetsgrade, soos in BSI DD 21/1972 voor voorsiening gemaak word sal onderworpe wees aan onderhandeling.
(ii) Ultrasoniese toets spesifikasies ander dan BSI DD 21/1972 sal onderworpe wees aan onderhandeling.

NOTE:
(i) Other testing grades as provided for in BSI DD 21/1972 will be subject to negotiation.
(ii) Ultrasonic testing specifications other than BSI DD 21/1972 will be subject to negotiation.

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KROPPLAAT EN PLATWALSER — PLATES AND SLABS

5. SPESIALE VERVAARDIGINGS/METALLURGIESE VEREISTES (VERVOLG) / SPECIAL PROCESSING/METALLURGICAL REQUIREMENTS (CONTINUED)

5.2 METALLURGIESE EISTES (VERVOLG) / METALLURGICAL REMARK (CONTINUED)
(SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER) / (APPLICABLE ONLY IF SPECIFIED ON ORDER)

KODE/ CODE			EKSTRA/ EXTRA
	5.2.2. Slagproewe:—	5.2.2. Impact tests:—	R.v.e.
	(a) Slagproewe vir inligting alleen: (Oorlangs) Charpy-slagproewe uitgevoer teen 'n spesifieke temperatuur vir inligting alleen met geen minimum gespesifiseerde energiewaardes. Gebaseer op een stel van drie proefstawe van die dikste plaat van 'n spesifieke massa of gedeelte daarvan van een plat.	(a) Impact tests for information only: (Longitudinal) Charpy impact tests conducted at a specified temperature for information only with no minimum energy value specified. Based on one set of three tests from the thickest plate of a specified tonnage or part thereof from one cast	2-25
3231	Temperature/Temperatures: RT (20 Deg. C)		
3232	LT0 (0 Deg. C)		
3233	LT5 (-5 Deg. C)		
3234	LT10 (-10 Deg. C)		
3235	LT15 (-15 Deg. C)		
3236	LT20 (-20 Deg. C)		
3237	LT30 (-30 Deg. C)		
3238	LT40 (-40 Deg. C)		
3239	LT50 (-50 Deg. C)		
	(b) Vir toetsing van geospesifiseerde aantal tonne per plat, byv. SS 4360 Grade A,B,C or D (Oorlangs):	(b) For testing specified number of tons per cast, viz. BS 4360 Grades A,B,C or D (Longitudinal)	
	(i) N.T.	(i) N.T.	4-25
3240	Temperature/Temperatures: RT (20 Deg. C)		
	(ii) Een stel van drie proefstawe vir temperature laer as N.T.	(ii) 1 set of 3 tests for temperatures lower than N.T.	5-75
3235	Temperature/Temperatures: LT0 (0 Deg.C)		
3237	LT5 (-5 Deg. C)		
3239	LT10 (-10 Deg. C)		
3241	LT15 (-15 Deg. C)		
3243	LT20 (-20 Deg. C)		
3245	LT30 (-30 Deg. C)		
3247	LT40 (-40 Deg. C)		
3249	LT50 (-50 Deg. C)		
	(c) Vir toetsing van elke gewalste plaat (Produk van 'n plaklos) byv. BS 1501 Part 1 of 3547AO Grade K (Oorlangs)	(c) For testing each rolled plate (Product of a slab) e.g. BS 1501 Part 1 or BS 4360 Grade K (Longitudinal)	
	(i) Een stel van drie toetse vir temperature -5 grade of hoër	(i) 1 set of 3 tests for temperatures -5 deg. or higher	11-75
3229	Temperature/Temperatures: RT (20 Deg. C)		
3230	LT0 (0 Deg. C)		
3238	LT5 (-5 deg. C)		
	(ii) Een stel van drie toetse vir temperature laer as -5 grade	(ii) 1 set of 3 tests for temperatures lower than -5 degrees	15-50
3240	LT10 (-10 deg.C)		
3242	LT15 (-15 deg.C)		
3244	LT20 (-20 deg.C)		
3246	LT30 (-30 deg.C)		
3248	LT40 (-40 deg.C)		
3250	LT50 (-50 deg.C)		
	OPMERKING: Slagproewe — Dwarse stel op aanbeveling word.	NOTE: Impact Tests — Transverse will be supplied on applications.	

1993-01-01 — Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated — 1991-07-03

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5. SPESIALE VERWERKINGS/METALLURGIESE VEREISTES (VERVOLG) / SPECIAL PROCESSING/METALLURGICAL REQUIREMENTS (CONTINUED)

5.2 METALLURGIESE EKSTRAS (VERVOLG) / METALLURGICAL EXTRAS (CONTINUED)

(SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER) / (APPLICABLE ONLY IF SPECIFIED ON ORDER)

KODE/ CODE		EKSTRA EXTRA
	5.2.3 Toetsing van Plate / Testing of Plates	
	(i) Warmtoetsing van plate: / (i) Hot testing of plates:	
	Temperature/Temperatures:	
3271	Teen/at 100 deg. C	7-00
3272	Teen/at 150 deg. C	7-00
3273	Teen/at 200 deg. C	7-00
3975	Teen/at 250 deg. C	7-00
2314	Teen/at 300 deg. C	7-00
2184	Teen/at 350 deg. C	7-00
3274	Teen/at 400 deg. C	7-00
2036	Teen/at 450 deg. C	7-00

5.3 UITREIKING VAN TOETS- EN/OF GIETANALISESERTIFIKATE / SUPPLY OF TEST AND/OR CAST ANALYSIS CERTIFICATES

Van toepassing op Handelskwaliteit Grofplaat en Platblokke C 0,33% maksimum / Applicable to Commercial Quality Plates and Slabs C 0,33% Max.

PER ITEM TON(S)	GIETANALISE-SERTIFIKATE (GIETPOTANALISE/ CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2003)	TOETS- EN GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ TEST AND CAST ANALYSIS CERTIFICATE (LADLE ANALYSIS) (2005)
	R.c.	R.c.
0 - 10	4-20	8-25
>10 - 20	3-50	7-30
>20 - 30	1-90	4-70
>30 - 40	1-50	2-85
> 40	0-95	1-70

5.4 EKSTRAS VIR BYWONING VAN TOETSE EN INSPEKSIE DEUR BUITE INSTANSIES / EXTRA FOR WITNESSING OF TESTS AND INSPECTION BY OUTSIDE AUTHORITIES

KODE/ CODE	(Slegs van toepassing indien op bestelling gespesifiseer/ Applicable only if specified on order)	EKSTRA/ EXTRA R.c.
	5.4.1 Bywoning van Meganiese Toetse (Uitsluitende Ultrasoniese Toetsing) / 5.4.1 Witnessing of mechanical tests (Excluding Ultrasonic Testing)	
	(a) Deur Lloyds opsiener vir - / (a) By Lloyds surveyor for -	
3309	(i) Skeepsplaat A/B/Struktuurplaat ..... / (i) Ship Plate A/B/Structural Plate	6-70
3310	(ii) Skeepsplaat C/D/E/Ketelplaat ..... / (ii) Ship plates C/D/E/Boiler Plate	7-95
3311	(b) Deur Germanischer Lloyd opsiener vir Skeepsplaat ..... / (b) By Germanischer Lloyd surveyor for Ship Plates	8-45
3312	(c) Deur klant ..... / (c) By customer	4-25
	(d) of sy verteenwoordiger andere dan in (a) of (b) genoem, soos: / (d) or his representative other than (a) or (b) above such as:	
3313	S.A. Spoorweë/S.A. Railways	2-10
3314	A.B.S.	4-25
3315	General Superintendence	4-25
3316	British Engine and Insurance	4-25
3317	T.U.V.	4-25
	(e) Vir elke verteenwoordiger bykomend tot (a), (b) of (c) bo genoem ..... / (e) For each representative additional to (a), (b) or (c) above	8-45
	5.4.2 Bywoning van ultrasoniese toetse / 5.4.2 Witnessing of ultrasonic tests	
3320	(a) Deur klant ..... / (a) By customer	8-45
	(b) of sy verteenwoordiger soos: / (b) or his representative such as:	
3318	Lloyds	8-45
3319	Germanischer Lloyd	8-45
3321	S.A. Spoorweë/S.A. Railways	8-45
3322	A.B.S.	8-45
3323	General Superintendence	8-45
3324	British Engine and Insurance	8-45
3325	T.U.V.	8-45
	(c) Vir elke bykomende verteenwoordiger ..... / (c) For each additional representative	16-90
2396	5.4.3 Toetse- bywoning van toetse en uitmerk uitmerk van toetsstuk monsters deur TUV. / 5.4.3 Tests- Witnessing of tests and marking out of test piece samples by TUV.	10-15

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5. SPESIALE VERWERKINGS/METALLURGIESE VEREISTES (VERVOLG)
SPECIAL PROCESSING/METALLURGICAL REQUIREMENTS (CONTINUED)

5.4 EXTRAS VIR BYWONING VAN TOETSE EN INSPEKSIE DEUR OUTOMATIESE INSTANSIES (VERVOLG)
5.4 EXTRAS FOR WITNESSING OF TESTS AND INSPECTION BY OUTSIDE AUTHORITIES (CONTINUED)

(SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER)
(APPLICABLE ONLY IF SPECIFIED ON ORDER)

KODE/ CODE					EKSTRA/ EXTRA
	5.4.3	Oppervlak Inspeksie	5.4.3	Surface Inspection	R.e.
3328	(a)	Deur klant	(a)	By customer	R=45
	(b)	of sy verteenwoordiger soos:	(b)	or his representative such as:	
3329		Lloyds			R=45
3327		Germanischer Lloyd			R=45
3329		S.A. Spoorweë/S.A. Railways			R=20
3330		A.S.M.E.			R=45
3331		General Superintendence			R=45
3332		British Engine and Insurance			R=45
3333		T.U.V.			R=45
	(c)	Vir elke bykomende verteenwoordiger	(c)	Per each additional representative	16=90
	5.4.4	Bywoning van ultrasoniese toetse en oppervlak inspeksie	5.4.4	Witnessing of ultrasonic tests and surface inspection	
3334	(a)	Deur klant	(a)	By customer	R=45
	(b)	of sy verteenwoordiger soos:	(b)	or his representative such as:	
3224		Lloyds			R=45
3335		Germanischer Lloyd			R=45
3337		S.A. Spoorweë/S.A. Railways			R=45
3338		A.S.M.E.			R=45
3339		General Superintendence			R=45
3340		British Engine and Insurance			R=45
3341		T.U.V.			R=45
	(c)	Vir elke bykomende verteenwoordiger	(c)	Per each additional representative	16=90

6. EKSTRAS VIR BEPERKING OP KOS- OF ONDERMAAT TOELATINGS
(INDIEN OP BESTELLING GESPESIFISEER)
(Vervyys bladsy 25, par. 3.6)
EXTRAS FOR LIMITATIONS ON OVERRUNS OR UNDERRUN ALLOWANCES
(WHEN SPECIFIED ON ORDER)
(Refer page 25, par. 3.6)

KODE/ CODE					EKSTRA/ EXTRA R.e.
2408	(i)	50% beperking van standaard oor- of ondermaat toelating	(i)	50% limitation on standard over- age or underage allowance	R=80
2409	8(ii)	Maksimum 25% oor- of ondermaat van item massa, gespesifiseer word	8(ii)	Plus 25% overage or underage of item mass, is specified	13=55
2410	(iii) (a)	Vir gespesifiseerde minimum hoeveelhede	(iii) (a)	For specified minimum quantities	3=30
2293	(b)	Vir gespesifiseerde maksimum hoeveelhede (Uitsluitende skattes vir beperk- inge op oor- of ondermaat)	(b)	For specified maximum quantity (Excluding surtax for restric- tions on overage or underage)	3=30
2170	(iv)	Presiese aantal plate - $\geq$ 12 mm	(iv)	Exact number of plates - $\geq$ 12 mm	16=75

8. Slegs van toepassing op items onder 100 tons.

8. Applicable only to items under 100 tons.

1982-01-01

Kansellasie en vervanging uitgereik gedateer
Cancels and supersedes issued dated

1981-07-01A

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5. STANDAARDVERVAARDIGINGSPRAKTYK
STANDARD MANUFACTURING PRACTICE

1. OMVANG/
SCOPE:

1.1 Groefplaat
Groefplaat bestaan uit daardie groep plat, warmgewalste, voltooide produkte wat gewals word in diktes van 4,5 mm tot en met 50 mm en waarvan die grootte beperk word tot dié aangetoon in die tabelle vir breedte, lengte, wydte en dikte.

1.2 Plaatblokke
Plaatblokke word gewals in diktes dikker as 50 mm tot 150 mm, en die grootte word beperk tot dié aangetoon in die tabelle vir breedte, lengte, wydte en dikte.

1.1 Plates
Plates comprise that group of flat, hot rolled, finished products which are rolled in thicknesses from 4,5 mm to 50 mm inclusive and are limited in sizes to those shown in the mass, Length, width and thickness tables.

1.2 Slabs
Slabs are rolled in thicknesses from over 50 mm to 150 mm inclusive and are limited in sizes to those shown in the case, length, width and thickness tables.

2. KWALITEIT/
QUALITY

2.1 Handelskwaliteit
Waar staal van handelskwaliteit bestel word, is die volgende analise, toetse en toleransies van toepassing:

2.1 Commercial Quality
When commercial quality steel is ordered the following analysis, tests and tolerances are applicable:

2.1.1 Chemiese Analise
Handelskwaliteit-groefplaat en -plaatblokke word gespesifiseer slegs ten opsigte van chemiese samestellingsgrense en -grense, gebaseer op gietanalise. Sodanige staal bevat 'n maksimum koolstofinhoud van 0,33% en 'n maksimum swawel- en fosforinhoud van 0,04% elk en word, also vervaardig om aan bestekvereistes te voldoen nie.

2.1.1 Chemical Analysis
Commercial quality plates and slabs are specified only to chemical composition ranges and limits, based on ladle analysis. They have a maximum carbon content of 0,33%, a maximum sulphur and phosphorus content of 0,04% in each case, and are not produced to conform to tensile strength requirements.

2.1.2 Buigtoetsstroke (Slegs op Groefplaat van toepassing)
Toetsstroke word in die lengte of deurs gesny en is minstens 38 mm wyd. Die ru-kant of snyrand deur snyprosesse veroorsaak, kan verwyder word deur middel van vyl, slyp of masjinering en die skerpheid of grofheid hiervan verwyder, kan afgevlak of deurgevyl word, maar die toetsstroke ontvang geen verdere behandeling nie.
Die toetsstroke moet, wanneer koud, in staat wees om dubbelgebuig te kan word, sonder om te breek, tussen die binnediameter gelyk is aan drie maal die dikte van die toetsstuk, met die kante parallel.

Wanneer Groefplaat in 'n vervaardigingsproses gebuig moet word, moet 'n ruimer buigeraal toegepas word veral wanneer die buigas in 'n ongunstige rigting wys. Daar word twee buigtoetse van elke smeltuitgevoer; maar in gevalle waar die vervaardigde materiaal van 'n smelt minder as 30 ton is, is een buigtoets genoegsaam. Indien materiaal uit een gietpot 10,0 mm of meer in dikte verskil, word een buigtoets uitgevoer op sowel die dikste as die dunste materiaal gewals, ongeag die massa wat dit verteenwoordig.

2.1.2 Bend Test Pieces (Applicable to Plates only)
Test pieces are cut lengthwise or crosswise and are not less than 38 mm wide. The rough edge or arris caused by cutting or shearing may be removed by filing, grinding or machining and the sharpness or roughness resulting from this may be ground or draw filed but the test pieces are given no other treatment.
Two test pieces, when cold, shall withstand without fracture, being doubled over until the internal diameter is equal to three times the thickness of the test piece and the sides parallel.

Where Plates are to be bent in a fabricating operation, a more liberal bend radius must be used particularly if the bend axis is in an unfavourable direction.
Two bend tests are made from each heat unless the finished material from a heat is less than 30 tons, in which case one bend test is sufficient. If, however, material from the cast differs 10,0 mm or more in thickness, one bend test is made from both the thickest and thinnest material rolled, regardless of mass represented.

1973-09-01

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2. KWALITEIT (VERVOLG)/ QUALITY (CONTD)

2.1.3 Oppervlaktoestandpraktyk

Gebreke wat nie die bruikbaarheid van Grofplaat en Platblokke raak nie, word gewoonweg nie as skadelike defekte beskou nie.

Platblokke

'n Bevredigende oppervlaktoestand kan deur middel van afhaktaling of enige ander geskikte metode verkry word.

Grofplaat

'n Bevredigende oppervlaktoestand kan verkry word deur die oppervlakdefekte weg te slyp. Die geslypte oppervlak word eweredig afgewerk, en die dikte word met hoogstens 7% van die nominale dikte verminder, maar onder geen omstandighede meer as 3 mm nie.

2.1.3 Surface Condition Practice

Imperfections that do not affect the utility of the Plates and Slabs are not commonly considered to be injurious defects.

Slabs

Slabs may be conditioned to obtain a satisfactory surface condition by chipping or any other suitable method.

Plates

Plates may be conditioned for the removal of surface defects by grinding. The ground area is well flared and the thickness is not reduced by more than 7% of the nominal thickness but in no case more than 3 mm.

3. TOLERANSIES/ TOLERANCES

3.1 Dikte toleransie

(a) Toelaatbare afwyking onder gespesifiseerde dikte 0,3 mm.

(b) Dikte gemeet te word tussen 10 en 20 mm vanaf die oorlangse kant.

(c) Vir dikte gemeet by enige ligging ander dan gespesifiseer in (b) bo die toelaatbare maksimum oor-toleransie, sal verhoog word met 75% afgerond tot die naaste 0,1 mm.

3.1 Thickness Tolerances

(a) Permissible variation under specified thickness 0,3 mm.

(b) Thickness to be measured at between 10 and 20 mm from the longitudinal edge.

(c) For thickness measured at any location other than specified in (b) above the permissible maximum over tolerance shall be increased by 75% rounded to the nearest 0,1 mm.

DIKTE (mm) THICKNESS (mm)	TOLERANSIE OOR GESPESIFISEERDE DIKTE (mm) TOLERANCE OVER SPECIFIED THICKNESS (mm)							
	<1 200	≥1 200 – <1 500	1 500 – <1 800	1 800 – <2 100	2 100 – <2 400	2 400 – <2 700	2 700 – <3 000	3 000 – 3 200
4,5 – <6,0	–	–	–	0,5	0,6	0,7	0,8	0,9
6,0	–	–	–	0,5	0,6	0,7	0,9	1,0
7,0	–	–	–	0,6	0,7	0,8	0,9	1,0
8,0	–	–	–	0,6	0,7	0,8	0,9	1,0
9,0	–	–	–	0,6	0,7	0,8	1,0	1,0
10,0	–	–	–	0,7	0,7	0,8	1,0	1,0
11,0	–	–	–	0,7	0,8	0,8	1,0	1,0
* 12 – <14	0,5	0,6	0,6	0,7	0,8	0,9	1,0	1,0
14 – <16	0,6	0,6	0,7	0,7	0,9	0,9	1,0	1,1
16 – <18	0,7	0,7	0,7	0,7	0,9	0,9	1,0	1,1
18 – <20	0,7	0,7	0,7	0,8	0,9	1,0	1,1	1,2
20 – <22	0,7	0,8	0,8	0,8	0,9	1,0	1,2	1,2
22 – <25	0,8	0,9	0,9	0,9	1,0	1,1	1,3	1,3
25 – <28	0,9	0,9	1,0	1,0	1,0	1,2	1,3	1,5
28 – <30	1,0	1,0	1,1	1,1	1,1	1,3	1,4	1,8
30 – <32	1,1	1,1	1,2	1,2	1,2	1,4	1,5	1,8
32 – <35	1,2	1,2	1,3	1,3	1,3	1,5	1,6	2,0
35 – <38	1,3	1,3	1,4	1,4	1,4	1,6	1,7	2,3
38 – <40	1,4	1,4	1,5	1,5	1,5	1,7	1,8	2,3
40 – <45	1,5	1,5	1,6	1,6	1,6	1,8	2,0	2,5
45 – <50	1,6	1,6	1,7	1,8	1,8	2,0	2,3	2,8
50 – <55	1,8	1,8	1,8	2,0	2,0	2,3	2,5	3,0
55 – <60	2,0	2,0	2,0	2,2	2,2	2,5	2,8	3,3
60 – <70	2,3	2,3	2,3	2,4	2,4	2,8	3,0	3,4
70 – <80	2,5	2,5	2,5	2,6	2,6	3,0	3,3	3,5
80 – <90	2,8	2,8	2,8	2,8	2,8	3,3	3,5	3,5
90 – <100	3,0	3,0	3,0	3,0	3,0	3,5	3,5	3,5
100 – <110	3,3	3,3	3,3	3,3	3,5	3,8	3,8	3,8
110 – <120	3,5	3,5	3,5	3,5	3,5	3,8	3,8	3,8
120 – <130	3,8	3,8	3,8	3,8	3,8	3,8	3,8	3,8
130 – <140	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
140 – <150	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3
150	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5

* > 12 mm

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3. TOLERANSIES (VERVOLG)/
TOLERANCES (CONTINUED)

3.2 Wydte- en lengte-toleransies.
Die toelaatbare afwyking onder die gespesifiseerde wydte en lengte is 6 mm.
Die toelaatbare afwyking oor die gespesifiseerde wydte en lengte is soos volg:-

3.2 Width and Length tolerances.
The permissible variation under specified width and length is 6 mm.
The permissible variation over specified width and length is as follows:-

GESPESIFISEERDE AFMETINGS / SPECIFIED DIMENSIONS.		TOLERANSIES OOR GESPESIFISEERDE WYDTE EN LENGTE VIR DIKTES IN MILLIMETERS / TOLERANCES OVER SPECIFIED WIDTH AND LENGTH FOR THICKNESSES IN MILLIMETRES							
LENGTE m / LENGTH m	WYDTE mm / WIDTH mm	4,5 – <10		10 – <18		18 – <25		25 – 50	
		WYDTE WIDTH	LENGTE LENGTH	WYDTE WIDTH	LENGTE LENGTH	WYDTE WIDTH	LENGTE LENGTH	WYDTE WIDTH	LENGTE LENGTH
<3,0	<1 500	—		11	16	13	19	16	25
	1 500 – <2 100	11	16	13	17	16	22	19	25
	2 100 – <2 700	13	19	16	22	19	25	25	29
	2 700 – <3 200	16	22	19	25	22	29	29	32
3,0 – <6,1	<1 500	—		13	22	16	25	19	29
	1 500 – <2 100	11	19	16	22	19	25	22	32
	2 100 – <2 700	14	22	17	24	22	29	25	35
	2 700 – <3 200	16	25	19	29	22	32	29	35
6,1 – <9,1	<1 500	—		13	29	16	32	19	38
	1 500 – <2 100	13	25	16	29	19	32	22	38
	2 100 – <2 700	14	25	17	29	22	33	25	38
	2 700 – <3 200	17	29	22	32	25	33	32	44
9,1 – <12,2	<1 500	—		13	32	16	38	19	41
	1 500 – <2 100	13	32	16	35	19	38	22	41
	2 100 – <2 700	14	32	19	35	22	38	25	48
	2 700 – <3 200	19	35	22	38	25	41	32	48
12,2 – <15,2	<1 500	—		13	38	16	41	19	48
	1 500 – <2 100	13	35	16	38	19	41	22	48
	2 100 – <2 700	16	35	19	38	22	41	25	48
	2 700 – <3 200	19	38	22	41	25	44	32	48
15,2 – <18,3	<1 500	—		16	48	19	48	22	57
	1 500 – <2 100	16	44	19	48	22	48	25	57
	2 100 – <2 700	16	44	19	48	22	48	29	57
	2 700 – <3 200	22	44	25	51	29	57	32	64
≥18,3	<1 500	—		19	54	22	57	25	70
	1 500 – <2 100	19	51	22	54	25	57	29	70
	2 100 – <2 700	19	51	22	54	25	57	32	70
	2 700 – <3 200	25	51	29	60	32	64	39	76

3.3.1 PLATHEIDSTOLERANSIES
Die toelaatbare afwyking in die plat-oppervlak vir plate tot 3,7 m in lengte of vir enige 3,7 m van langer plate, is soos aangetoon in die volgende tabelle:-

3.3.1 FLATNESS TOLERANCES
Permissible variations from flat surfaces for plates up to 3,7 m in length or for any 3,7 m of longer plates, are as shown in the following tables:-

GESPESIFISEERDE DIKTES / SPECIFIED THICKNESSES mm	PLATHEIDSTOLERANSIE VIR GESPESIFISEERDE WYDTES (mm) (MAKSIMUM AFWYKING VAN HORISONTALE PLAT OPPERVLAK) / FLATNESS TOLERANCE FOR SPECIFIED WIDTHS (mm) (MAXIMUM DEVIATION FROM HORIZONTAL FLAT SURFACE)							
	<910	910 – <1220	1220 – <1520	1520 – <1830	1830 – <2110	2110 – <2440	2440 – <2740	2740 – <3050	3050 – 3200
4,5 – < 6,5					35	38	41	44	48
6,5 – < 9,5					29	32	35	38	41
9,5 – 13,0					19	22	25	29	32
13,0 – 19,0	11	13	14	16	16	19	23	25	29
19,0 – 25,0	11	13	14	16	16	16	19	22	13
25,0 – 50,0	10	13	13	14	14	16	16	16	13
50,0 – 100,0	8	10	11	13	13	13	13	14	11

(i) Opmerkings
Die plate in tabel 1a van toepassing op koolstofstaalplate met 'n treksterkte van nie 410 MPa of die vergelykbare chemiese samestelling of hardheid soortgelyke nie.

(ii) Vir koolstofstaalplate met 'n gespesifiseerde treksterkte van meer as 410 MPa of vergelykbare chemiese samestelling of hardheid moet die grense wat in bostaande tabel aangedui word met 50% verminder.

(iii) Die plathoidsafwyking oor die wydte behoort nie die getabuleerde waardes vir die gespesifiseerde wydte oorskry nie.

(i) Notes:
The above table applies to carbon steel plates which have a specified min. tensile strength of not more than 410 MPa or comparable chemistry or hardness.

(ii) For carbon steel plates with a specified min. tensile strength of more than 410 MPa or comparable chemistry or hardness, the limits in the table are increased by 50%.

(iii) The flatness variation across the width should not exceed the tabular amount for the specified width.

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3.3.2 TOELAATBARE VARIASIES IN GOLWERIGHEID VIR REGHOEKIGE PLATE

Golwerigheid dui die maksimum afwyking aan van die oppervlak van die plaat van 'n vlak parallel met die oppervlak van die meetpunt en aangrensend aan die oppervlak van die plaat by elk van die twee aanliggende golfspitse, wanneer die plaat op 'n plat horisontale oppervlak rus, soos gemeet in 'n vermeerdering van minder as 3,7 m in lengte. Die golwerigheidstoleransie is 'n funksie van die platheidstoleransie, soos verkry uit die tabel onder 3.3.1

3.3.2 PERMISSIBLE VARIATIONS IN WAVINESS FOR RECTANGULAR PLATES

Waviness denotes the maximum deviation of the surface of the plate from a plane parallel to the surface of a point of measurement and contiguous to the surface of the plate at each of the two adjacent wave peaks, when the plate is resting on a flat horizontal surface, as measured in an increment of less than 3,7 m of length. The waviness tolerance is a function of the flatness tolerance, as obtained from the table under 3.3.1

PLATHEIDSTOLERANSIE (mm) UIT TABEL ONDER PARA. 3.3.1	GOLWERIGHEIDSTOLERANSIE (mm) WANNEER GETAL GOLWINGS IN 3,7 m IS						
FLATNESS TOLERANCE (mm) FROM TABLE UNDER PARA. 3.3.1	WAVINESS TOLERANCE (mm) WHEN NUMBER OF WAVES IN 3,7 m IS						
	1	2	3	4	5	6	7
8	8	6	5	3	3	2	2
10	10	8	5	5	3	2	2
11	11	8	6	5	3	3	2
13	13	10	8	5	5	3	2
14	14	11	8	6	5	3	2
16	16	13	10	6	5	3	2
18	18	13	10	8	5	5	2
19	19	14	11	8	6	5	2
22	22	17	13	10	6	5	2
24	24	17	13	10	8	6	5
25	25	19	14	11	8	6	5
29	29	22	16	13	10	6	5
32	32	24	17	13	10	8	6
35	35	27	19	14	11	8	6
38	38	29	22	16	13	10	6
41	41	32	24	17	13	10	8
44	44	33	25	19	14	11	8
48	48	37	27	21	14	11	8

3.4 KROMMINGTOLERANSIE/CAMBER TOLERANCE

Die maksimum kromming = 0,25% van lengte

Maximum camber = 0,25% of length

3.5 TOLERANSIE VIR KWALITEITE ANDER AS HANDELSKWALITEIT/ TOLERANCES FOR QUALITIES OTHER THAN COMMERCIAL QUALITY

Grofplaat word volgens ASTM-, BS- en ander spesifikasies geproduseer. Behalwe soos andersins ooreengekom word kwaliteite andere as Handelskwaliteit in ooreenstemming met die vereistes van die betrokke spesifikasie voorsien.

Plates are produced to ASTM-, BS- and other specifications. Unless otherwise agreed upon qualities other than Commercial Quality, are supplied in accordance with the requirements of the relevant specification.

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3. TOLERANSIES (VERVOLG)
TOLERANCES (CONTINUED)

3.6 OOR- OF ONDERMAAT
Vir hoeveelhede van plate bestel, of dit op tonnemaat of aantal plate basis is, word die reg voorbehou om binne die toleransies hieronder gespesifiseer te lewer-

3.6 OVERAGE OR UNDERAGE
For quantities of plates ordered per item whether on a tonnage or number of plates basis the right is reserved to supply within the tolerances specified below-

Massa van item bestel of die berekende massa van die aantal plate bestel.	Oormaat/Overage (+)
Mass of items ordered or the calculated mass of the number of plates ordered	Ondermaat/Underage (-)
Ton(s))	Ton/Tons
2 - < 5	+ 1 - 1
5 - < 10	+ 2 - 3
10 - < 20	+ 3 - 4
20 - < 40	+ 4 - 5
40 - < 100	+ 4 - 6
≥ 100	+ 6 - 10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van toepaslike plus- en minus-toleransie nooit. Beperkings op bogenoemde toleransies - verwys blaaie P15' par. 6.

Where a minimum or maximum quantity is specified the overage or underage will be the total of the applicable plus and minus tolerances. Restrictions on the above tolerances - refer page P15' par. 6.

4. PRODUKSIE STATUS/PRODUCT INFORMATION

4.1 Hoë Koolstofstaal (4.1. C 0.25% en oor)
Plate kan slegs gesnoei word in dikte ≤25 mm. Plate >25 mm dik kan nie gesnoei word nie.
Worms kan ongemyndes plate met 'n minimum massa van 2 ton voorsien. Onderworpe aan aanvraag.

4.1 High Carbon steels (i.e. C 0.25% and over)
Plates can only be sheared in thicknesses ≤25 mm. Plates >25 mm thick can be flame cut to size.
Worms can supply unmyn plates with a minimum mass of 2 tons. Subject to application.

4.2 Platblaaie >150 mm dik
Worms kan platblaaie >150 mm slegs op aanvraag voorsien. Behalwe soos anders sinar vermeld, word daar nie verbind die worms die interne soliditeit van platblaaie >150 mm dik nie.

4.2 Slabs over >150 mm thick
Worms can supply slabs >150 mm thick subject to application only. Unless otherwise agreed worms do not guarantee internal soundness of slabs >150 mm thick.

4.3 Spesiale spesifikasies word voor vervaardig deur die Werke met die volgende kleur-kodes gemerk.

4.3 Certain specifications are marked with a colour code by the Works prior to dispatch as follows.

SS 10/87 - Blou op hoeke/Blue on corners
SS 10/44 - Groen op hoeke/Green on corners
SS 10/200 - Rooi/Groen op hoeke/Red/Green on corners

Corners A on/and B Canal Centennial / Yellow streamlining
CME 9 - Simbool/Symbol 6 Canal een kant / Yellow on side
CME 9 - Simbool/Symbol 8 Rooi een kant / Red on side

Lloyds skeepsplate wil gewoonlik sirkel rondom kwaliteitsmerk/Lloyds ship plates usually encircle quality mark.

1981-07-03 Kansellasie en vervanging uitgereik/ Cancels and supersedes issue dated 1980-04-01

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SS
S.P.E. 110

5. EINDGEBRUIKE
END USES

Algemene leidraad t.o.v. die eindgebruik van plate van verskillende kwaliteite
Vir die gerief van klante word die eindgebruik van sommige van die kwaliteite deur ons vervaardig, hieronder aangetoon. Die eindgebruik teenoor die verskillende kwaliteite aangetoon, moet [illegible] as 'n algemene leidraad dien aangesien die kwaliteite onder sekere omstandighede vir ander aanwendings gebruik mag word. Waar kliente in twyfel is oor die kwaliteit benodig vir 'n bepaalde eindgebruik, moet die aangeleentheid in elk geval vir bevestiging na ons verwys word.

General guide on the end-use of plates of various qualities
For the convenience of customers, the end-use of some of the qualities manufactured by us, are listed below. The end-use shown against the various qualities should serve as a general guide only, as the qualities shown, may under certain circumstances be substituted for other applications. In any event, where customers are in doubt about the quality required for a particular end-use, the matter should be referred to us for confirmation.

SS-SPESIFIKASIES	ALGEMENE EINDGEBRUIK
SS-SPECIFICATIONS	GENERAL END-USE
SS 1501/151	Koolstofstaalplaat (halfgedood) vir drukhouers/Carbon steel (semi-killed) plates for pressure vessels
SS 1501/161	Koolstofstaalplaat (Silikongedood) vir drukhouers/Carbon steel (silicon killed) plates for pressure vessels.
SS 4360 Grade 43A	Algemene struktuurdoeleindes/ General structural purposes.
SS 4360 Grade 50B	Hoëvloeipunkings - struktuurseiskwaliteit/High yield stress structural welding quality.

A.S.T.M. SPESIFIKASIES	ALGEMENE EINDGEBRUIK
A.S.T.M. SPECIFICATIONS	GENERAL END-USE
A.S.T.M. A283 Grades C & D	Algemene struktuurdoeleindes/General structural purposes.
A.S.T.M. A285 Grade C	Ketelplaat en plaat vir ander drukhouers (vir smeltsweising)/Plates for boilers and other pressure vessels (for fusion welding)
A.S.T.M. A515	Ketelplaat en plaat vir drukhouers (silikongedood)/Plates for boilers and other pressure vessels (silicon killed)

ANDER SPESIALE KWALITEITE	ALGEMENE EINDGEBRUIK
OTHER SPECIAL QUALITIES	GENERAL END-USE
Cor-Ten	Bestand teen atmosferiese korrosie, hoogtreksterkteverlaagleringstaal/High-strength low alloy, atmospheric corrosion resistant. Waar daar dikte, sterkte en/of goeie vormbaarheid vereis word, moet Cortan A-F gespesifiseer word (12,7 mm maks. dikte)/Where thickness, strength and/or good formability is required, Cortan A-F should be specified (12,7 mm max. thickness)

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S.P.E. 111

YSKOR BEPERK ISCOR LIMITED

GEROLLERBLUSTE EN GETEMPERDE GROFPLAAT / PLATBLOKKE

ROLLER QUENCHED AND TEMPERED PLATES / SLABS

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VOORWOORD

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.
3. Tensy anders bestel, is alle items onderworpe aan 'n oormaat of ondermaat - verwys bladsy S7, paragraaf 4 en P5 paragraaf 7.
4. Grofplaat en Platblokke word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die geykte massameter/massameterbrug by die Werke. Enige verwysing na die getal plate op die faktuur of vragbrief is slegs vir inligting.
5. Tensy anders vermeld, is ekstras en aftrekkings hierin gekwoteer per metrieke ton. Elke ekstra of aftrekking is afsonderlik en uitdruklik.
6. Pryse en ekstras is dié wat op die versendingsdatum geld, en is onderworpe aan verandering sonder kennisgewing.
7. Wanneer Grofplaat en/of Platblokke bestel word moet klante altyd die eindgebruik spesifiseer.
8. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie, behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys van die gewysigde bestelling weer bepaal.
9. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.
10. Met betrekking tot die voorsiening van Gerollerbluste en Getemperde staal word klante aangeraai om die Korporasie se brosjures te raadpleeg vir inligting aangaande minimum buigstraal, sweis- en ander vervaardigingsprosedures.
11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.
2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.
3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - refer page S7, paragraph 4 and P5 paragraph 7.
4. Plates and Slabs are sold at a price per metric ton (1 000 kilograms) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of plates and slabs on the invoice or consignment note is for information only.
5. Unless otherwise stated, extras and deductions quoted herein are per metric ton. Each extra or deduction is separate and distinct.
6. Prices and extras are those ruling on date of dispatch and are subject to change without notice.
7. When ordering Plates and/or Slabs, customers should always state the end-use.
8. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation, in writing. Should an order be modified, the order as amended will be repriced.
9. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.
10. Regarding the supply of Quenched and Tempered steel customers are advised to consult the Corporation's brochures for information relating to minimum bend radii, welding and other fabricating procedures.
11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

SPE111

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - Spesifiseer
   (e) Sertifisering - Tipe sertifikate
   (f) Verpakking - Spesifiseer
   (g) Oppervlak Afwerking
   (h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Massa ekstras
4. Wydte en Dikte
5. Lengte
6. Vlamsny ekstras
7. Kwaliteit
8. Rolblussing en Tempering
9. Beperking op oormaat/ondermaat
10. Invoerheffing (R10-25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Mariasburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - Specify
   (g) Surfce Finish
   (h) End Uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Mass extras
4. Width and Thickness
5. Length
6. Flame cutting extras
7. Quality
8. Roller Quenching and Tempering
9. Restriction on overage/underage
10. Import levy (R10-25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark. Vereeniging, Westonaria and Wonderboom.

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GEROLLERBLUSTE EN GETEMPERDE GROFPLAAT EN PLATBLOKKE / ROLLER QUENCHED AND TEMPERED PLATES/ AND SLABS

A. PRYSE / PRICES

1. BASISPRYS / BASIC PRICE

(a) PWV[1]) -gebied ..... R575-50 /1 000 kg v.o.s. Yskorwerke, Vanderbijlpark, (Sylyn 1414, Bijlkor) plus pad-vervoer/spoorvrag.

(b) Buite PWV[1]) -gebied ..... R575-50 /1 000 kg v.o.s. Germiston plus spoorvrag.

[1]) Verwys Kontrolelys par. C.

(a) PWV[1]) area ..... R575-50 /1 000 kg f.o.r. Iscor Works, Vanderbijlpark (Siding 1414, Bijlkor) plus cartage/ railage.

(b) Outside PWV[1]) area ..... R575-50 /1 000 kg f.o.r. Germiston plus railage.

[1]) Refer Check List par. C.

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS / QUANTITY EXTRAS/DEDUCTIONS

2.1 ITEM EKSTRAS/AFTREKKINGS

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigings-bestelling deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.1 ITEM EXTRAS/DEDUCTIONS

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for despatch to one destination at Works convenience.

ITEM(TON)	EKSTRA	ITEM (TON)	AFTREKKING
ITEM(TONS)	EXTRA R.c.	ITEM(TONS)	DEDUCTION R.c.
2 -<7(a)	97-85	20 - < 40	0-00
7 -<10	65-30	40 - < 60	13-05
10 -<20	32-60	60 - < 80	19-60
		⩾ 80	35-85

(a) Onderhewig aan navraag.

(a) Subject to enquiry.

2.2 MASSA-EKSTRAS

Grofplaat/Platblokke meer as 3,5 ton elk. (Slegs van toepassing indien en/of wanneer veelvoude of teruggesnyde groottes nie vir klant aanvaarbaar is nie).

2.2 MASS EXTRAS

Plates/Slabs more than 3,5 tons each. (Only applicable if and/or when multiples or cut-down sizes are not acceptable to customer).

TEORETIESE MASSA, GROFPLAAT/PLATBLOK	EKSTRA
THEORETICAL MASS, PLATE/SLAB	EXTRA
TON/TONS	R.c.
>3,5 - 4,5	17-80
>4,5 - 5,5	28-35
>5,5 - 6,5	39-00

3. GROOTTE-EKSTRAS / SIZE EXTRAS

3.1 VERWERKINGS-EKSTRAS / PROCESSING EXTRAS

DIKTE/ THICKNESS (mm)	WYDTE (STANDAARD TRAPPE VAN 100 mm)/WIDTH STANDARD INCREMENTS OF 100 mm						
	1200 - <1500	1500 - <1800	1800 & <2000	2000	>2000 - <2400	2400	>2400 - 2800
6,0	59-90	56-85	53-45	-	-	-	-
8,0	35-75	32-45	29-25	24-25	-	-	-
10,0	26-00	22-65	19-45	14-50	16-35	12-95	-
12,0	12-95	9-85	6-50	1-55	3-20	0-00	-
16,0	24-25	21-00	17-80	12-95	14-50	11-40	-
20,0	24-25	21-00	17-80	12-95	14-50	11-40	19-45
25,0	35-75	32-45	29-25	24-25	26-00	22-65	30-75
30,0	47-05	43-80	40-50	35-75	37-30	33-95	42-15
40,0	48-70	45-25	42-15	37-30	39-00	35-75	43-80
50,0	54-25	51-05	47-90	42-90	44-45	41-25	49-45
60,0	57-50	54-25	51-05	46-30	47-90	44-45	52-70

OPMERKINGS

1. Alle materiaal >18,0 mm dik (ROQ-TUF) en >12,0 mm dik (ROQ-LAST) is onderworpe aan vlamsnyekstras. (Verwys Bladsy P2 par. 3.3).
2. Wydtes <1200 mm - slegs op aansoek.
3. 6,0 mm dik - maks. 1800 mm en min. wydte 1200 mm.
4. 8,0 mm dik - maks. wydte 2000 mm vir ROQ-TUF en maks. wydte 1800 mm vir ROQ-LAST.
5. Diktes>50,0mm - standaardtrappe 10,0 mm.
6. Ander diktes - slegs op aansoek.

NOTES

1. All material > 18,0 mm thick (ROQ-TUF) and >12,0 mm thick (ROQ-LAST) is subject to flame cutting extras. (Refer Page P2 par. 3.3).
2. Widths <1200 mm - on application only.
3. 6,0 mm thick - max. width 1800 mm and min. width 1200 mm.
4. 8,0 mm thick - max. width 2000 mm for ROQ-TUF and max. width 1800 mm for ROQ-LAST.
5. thicknesses >50,0 mm - Standard increments 10,0 mm.
6. Other thicknesses - on application only.

3.2 LENGTE-EKSTRAS / LENGTH EXTRAS

LENGTE/LENGTH (mm) TRAPPE VAN 100 mm : INCREMENTS OF 100 mm	EKSTRA/ EXTRA
1000 - 1900	R.c. Op aansoek/ On application
2000	6-60
2100 - 2900	16-40
3000	5-50
3100 - 3900	13-90
4000	3-30
4100 - 5900	12-95
6000	2-20
6100 - 7900	11-70
8000	9-15
8100 - 11900	7-70
12000	0-00
12100 - 13000	Op aansoek On application

3.3 NIE-STANDAARDLENGTE - EKSTRAS / NON-STANDARD LENGTH EXTRAS

(Trappe - 25 mm)
Vir ander lengtes as in gelyke trappe van 100 mm is die standaardlengte-ekstras (Par. 3.2 hierbo) plus R3-35

(Increments - 25 mm)
For lengths other than in increments of 100 mm the standard length extras (par. 3.2 above) applies plus R3-35

3.4 VLAMSNY-EKSTRA / FLAME-CUTTING EXTRAS

DIKTE/ THICKNESS (mm)	EKSTRA IN R.c. PER METER VAN OMTREK EXTRA IN R.c. PER METRE OF PERIMETER
<35	2-35
35 - <50	2-70
50 - <75	3-35
75 - <100	4-40

NOT SECRET

GEROLLERBLUSTE EN GETEMPERDE GROFPLAAT EN PLATBLOKKE

ROLLER QUENCHED AND TEMPERED PLATES AND SLABS

4. KWALITEITSEKSTRAS / QUALITY EXTRAS

4.1 STRUKTURELE- EN DRUKHOUERGROFPLAAT/PLATBLOKKE / STRUCTURAL AND PRESSURE VESSEL PLATES/SLABS

	Kwaliteit/ Quality	Kode/ Code	Maksimum Dikte/ Maximum Thickness (mm)	Ooreenstemmende Spesifikasies/ Equivalent Specifications	Ekstra/ Extra
4.1.1	Strukturele Grade/ Structural Grades				R.c.
(a)	Koolstof Grade/ Carbon Grades				
	ROQ-tuf - C410	087	60	ASTM A678 Grade B	0-00
	ROQ-tuf - C500	155	50	ASTM A678 Grade C	10-50
	ROQ-tuf - C550 §	096	38		10-50
	ROQ-tuf - C620 §	109	38		11-50
	ROQ-tuf - C690 §	110	32		12-50
(b)	Lae Allooi Grade/ Low Alloy Grades				
	ROQ-tuf - AD690	245	32	ASTM A514 Type Grade J	281-25
	ROQ-tuf - AE690	247	50	ASTM A514 Type Grade M	359-50
	ROQ-tuf - AF690 1)	252	150 (1)	ASTM A514 Type Grade P	419-50
4.1.2	Drukhouer/ Pressure Vessel				
(a)	Koolstof Grade/ Carbon Grades				
	ROQ-tuf C410	570	100	ASTM A537 Class 2	64-75
	ROQ-tuf C500	571	16	ASTM A724 Grade B	75-25
	ROQ-tuf C550 §	467	38		75-25
	ROQ-tuf C620 §	572	38		76-25
	ROQ-tuf C690 §	573	32		77-00
(b)	Lae Allooi Grade/ Low Alloy Grades				
	ROQ-tuf - AD690	470	32	ASTM A517 1972 (a) Grade J)	Op aansoek/
	ROQ-tuf - AE690	471	50	ASTM A517 1972 (a) Grade M) °	
	ROQ-tuf - AF690 (2)	472	60 (2)	ASTM A517 1972 (a) Grade P)	On application
				° Sonder bykomstige vereistes/ Without supplementary requirements	

OPMERKING:
Die bogenoemde ekstras sluit normale toetsing soos voorgeskryf deur die betrokke spesifikasie in, maar ekstras vir Charpy slagtoetse is uitgesluit en onderworpe aan bevestiging en prysing.

§ Onderworpe aan bevestiging.
1) Diktes 100 - 150 mm op aansoek.
2) Diktes 60 - 100 mm op aansoek.

NOTE:
The above extras include normal testing as required by the relevant specification but exclude extras for Charpy impact tests which are subject to confirmation and pricing.

§ Subject to confirmation.
1) Thicknesses 100 - 150 mm on application.
2) Thicknesses 60 - 100 mm on application

4.2 SLYTBESTANDE GROEFPLAAT/PLATBLOKKE / ABRASION RESISTANT PLATES/SLABS

	Kwaliteit/ Quality	Kode/ Code	Maksimum Dikte/ Maximum Thickness (mm)	Ekstra/ Extra
4.2.1	Koolstof grade/ Carbon Grades			R.c.
	ROQ-last - C321	188	32	26-25
	ROQ-last - C340	244	25 (min dikte/thickness 8 mm)	32-50
4.2.2	Lae Allooi Grade/ Low Alloy Grades			
	ROQ-last - AH321	175	75	279-75
	ROQ-last - AH340	179	50	288-00
	ROQ-last - AH360	180	38	301-25
	ROQ-last - AH400	359	25 (min dikte/thickness 10 mm)	326-50
	ROQ-last - AD321	136	32	300-00
	ROQ-last - AD340	147	25	306-75
	ROQ-last - AD360	157	12	321-00
	ROQ-last - AE321	170	50	379-25
	ROQ-last - AE340	)	38	390-00
	ROQ-last - AE360	)	25	404-00
	ROQ-last - AF321	170	100	439-25
	ROQ-last - AF340	173	50	450-25
	ROQ-last - AF360	174	38	465-50

OPMERKING:
Die bogenoemde spesifikasies word alleenlik voorsien teen 'n minimum oppervlakbrinell hardheid en geen ander meganiese eienskappe nie.

NOTE:
The above specifications are supplied to minimum surface brinell hardness only and no other mechanical properties.

YSKOR BEPERK ISCOR LIMITED

S.P.E. 111

GEROLLERBLUSTE EN GETEMPERDE GROEPLAAT/EN PLATBLOKKE

ROLLER QUENCHED AND TEMPERED PLATES/AND SLABS

5. ROLBLUSSING EN TEMPERING EKSTRAS
ROLLING QUENCHING AND TEMPERING EXTRAS

GRAAD/GRADE	DIKTE (mm)/THICKNESS (mm)	WYDTE/WIDTH (mm)				
		1200 - <1500	1500 - <1800	1800 - <2100	2100 - 2400	>2400 - 2800
KOOLSTOF/CARBON	6,0; 8,0; 10,0	R.c. 219-95	R.c. 199-50	R.c. 176-60	R.c. 155-50	R.c. 178-50
	12; 16; 20; 25; 30	170-25	154-15	137-90	121-60	139-55
	40; 50; 60	173-45	157-35	141-00	124-80	142-65
LAE ALLOOI/LOW ALLOY	6,0; 8,0; 10,0	275-50	249-75	225-25	199-50	228-80
	12; 16; 20; 25; 30	228-80	205-75	184-75	162-05	188-00
	40; 50; 60	236-70	214-05	191-30	168-60	194-50

6. EKSTRAS VIR BEPERKING OP OOR- OF ONDERMAAT TOELATING (INDIEN OP BESTELLING GESPESIFISEER (Verwys bladsy S9 par. 4)
EXTRAS FOR LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE (WHEN SPECIFIED ON ORDER) (Refer page S9 par. 4)

(i) 50% beperking van standaard oor - of ondermaat toelating (2408) ..... R 8-25

° (ii) Wanneer 2½% oor- of ondermaat van item massa gespesifiseer word (2409) R12-65

° Slegs van toepassing op items onder 100 ton.

(iii) (a) Vir gespesifiseerde minimum hoeveelhede (2440) ..... R 3-30

(b) Vir gespesifiseerde maksimum hoeveelhede (2293) ..... R 3-30

(iv) Presiese aantal plate (2170) 12 mm... R15-70

(i) 50% limitation on standard overage or underage allowance (2408)..... R 8-25

° (ii) When 2½% overage or underage of item mass is specified (2409) ... R12-65

° Applicable only to items under 100 tons.

(iii) (a) For specified minimum Quantity (2440) ..... R 3-30

(b) For specified maximum quantity (2293) ..... R 3-30

(iv) Exact number of plates (2170).....12 mm... R15-70

7. PROSESSERING/PROCESSING

7.1 Vir Ultrasoniese toetse verwys na Bladsy S.9 par. 5

7.1 For Ultrasonic Tests refer to Page S.9 para. 5

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GEROLLERBLUSTE EN GETEMPERDE GROFPLAAT EN PLATBLOKKE

ROLLER QUENCHED AND TEMPERED PLATES AND SLABS

B. STANDAARDVERVAARDIGINGSPRAKTYK / STANDARD MANUFACTURING PRACTICE

1. OMVANG / SCOPE

Alle spesifikasies/grade van grofplaat en platblokke wat in hierdie prysskedule aangebied word, is watergeblus op 'n moderne rolbluseenheid en getemper.
Die beskikbare groottes word beperk tot dié aangetoon in die tabelle vir massa, lengte, wydte en dikte.

All specifications/grades of plates and slabs offered in this price schedule are water quenched on a modern roller quench unit and tempered.
The available sizes are limited to those shown in the mass, length, width and thickness tables.

2. KWALITEIT/QUALITY

2.1 ROQ-TUF C410
Struktuur en drukhouer kwaliteite

2.1.1 Hittebehandeling
ROQ-Tuf C410 is watergeblus en getemper teen 595°C of hoër.

2.1.2 Dikte beperkings
63,5 mm maks (struktuur)
100,0 mm maks (drukhouer)

2.1.3 Chemiese samestelling
(gietpotanalise) %

2.1 ROQ-TUF C410
Structural and pressure vessel qualities

2.1.1 Heat treatment
ROQ-Tuf C410 is water quenched and tempered at 595°C or higher.

2.1.2 Thickness limitations
63,5 mm max. (structural)
100,0 mm max. (pressure vessel)

2.1.3 Chemical Composition
(ladle analysis) %

	C Maks/Max	Mn 38 mm dik/ thick	Mn 38 mm dik/ thick	P Maks/Max	S Maks/Max	Si
Struktuur/Structural	0,20	0,70 - 1,35	1,00 - 1,60	0,040	0,050	0,15 - 0,50
Drukhouer/Pressure Vessel	0,24	0,70 - 1,35	1,00 - 1,60	0,035	0,040	0,15 - 0,50

OPMERKINGS:

1. Struktuur
Totale Aluminium inhoud sal 0,25 % min. wees.
Klein hoeveelhede legerings elemente mag voorkom (maks).
Ni = 0,25% Cr = 0,25% Mo = 0,08%
Cu = 0,35%

2. Drukhouer
Klein hoeveelhede legerings elemente mag voorkom (maks.)
Ni = 0,25% Cr = 0,25% Mo = 0,08%
Cu = 0,35%

2.1.4 Meganiese eienskappe
Struktuurstaal - soos per ekwivalente spesifikasie ASTM A678 Grade B.
Drukhouer staal - soos per ekwivalente spesifikasie ASTM A537 Class 2.

2.1.5 Bestellings moet ge-ëndosseer word -
ROQ-Tuf C410 (struktuur) of
ROQ-Tuf C410 (drukhouer)

NOTES:

1. Structural
Total Aluminium content will be 0,25% min.
The following small amounts of alloying elements may be present (max.)
Ni = 0,25% Cr = 0,25% Mo = 0,08%
Cu = 0,35%

2. Pressure Vessel
The following small amounts of alloying elements may be present (max.)
Ni = 0,25% Cr = 0,25% Mo = 0,08%
Cu = 0,35%

2.1.4 Mechanical Properties
Structural Steel - as per equivalent ASTM A678 Grade B.
Pressure Vessel Steel - as per equivalent specification ASTM A537 Class 2.

2.1.5 Orders must be endorsed -
ROQ-Tuf C410 (structural) or
ROQ-Tuf C410 (pressure vessel)

GEROLLERBLUSTE EN GETEMPERDE GROFPLAAT EN PLATBLOKKE

ROLLER QUENCHED AND TEMPERED PLATES AND SLABS

2. KWALITEIT (VERVOLG)
QUALITY (CONTINUED)

2.2 ROQ-Tuf C500
Struktuur en Drukhouer

2.2.1 Hittebehandeling
ROQ-Tuf C500 is watergeblus en getemper teen 595°C of hoër.

2.2.2 Dikte Beperkings
50 mm maksimum (struktuur)
16 mm maksimum (drukhouer)

2.2.3 Chemiese Samestelling
(Gietpotanalise %)

2.2 ROQ-Tuf C500
Structural and Pressure Vessel

2.2.1 Heat Treatment
ROQ-Tuf C500 is water quenched and tempered at 595°C or higher.

2.2.2 Thickness Limitations
50 mm maximum (structural)
16 mm maximum (pressure vessel)

2.2.3 Chemical Composition
(Ladle Analysis %)

	C Maks/Max	Mn	P Maks/Max	S Maks/Max	Si
Struktuur/ Structural	0,22	1,00 - 1,60	0,040	0,050	0,20 - 0,50
Drukhouer/ Pressure Vessel	0,20	1,00 - 1,60	0,035	0,040	0,50 maks/max

OPMERKINGS

1. STRUKTUUR
Indien nodig sal Boron bygevoeg word ten einde meganiese eienskappe te behaal.
Klein hoeveelhede legerings elemente mag voorkom (maks.)
Ni = 0,25% Cr = 0,25% Mo = 0,08% Cu = 0,35%

2. DRUKHOUER
Klein hoeveelhede legerings elemente mag voorkom (Maks) Ni = 0,25%; Cr = 0,25%; Mo = 0,08%; Cu = 0,35% V = 0,08% Maks. mag teenwoordig wees.

2.2.4 Meganiese Eienskappe
Struktuur Staal - soos per ekwivalente spesifikasie ASTM A678 Grade C.
Drukhouer Staal - soos per ekwivalente spesifikasie ASTM A724 Grade B.

2.2.5 Bestellings moet geëndosseer word -
ROQ-Tuf C500 (struktuur) of
ROQ-Tuf C500 (drukhouer)

NOTES

1. STRUCTURAL
Boron will be added if necessary to meet mechanical properties.
The following small amounts of alloying elements may be present (max.)
Ni = 0,25% Cr = 0,25% Mo = 0,08%
Cu = 0,35%

2. PRESSURE VESSEL
The following small amounts of alloying elements may be present : Max.)
Ni = 0,25%; Cr = 0,25%; Mo = 0,08%;
Cu = 0,35%
V = 0,08% max. may be present

2.2.4 Mechanical Properties
Structural Steel - as per equivalent specification ASTM A678 Grade C.
Pressure Vessel Steel - as per equivalent specification ASTM A724 Grade B.

2.2.5 Orders must be endorsed -
ROQ-Tuf C500 (structural) or
ROQ-Tuf C500 (pressure vessel).

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GEROLLERBLUSTE EN GETEMPERDE GROFPLAAT EN PLATBLOKKE ROLLER QUENCHED AND TEMPERED PLATES AND SLABS

2. KWALITEIT (VERVOLG)
QUALITY (CONTINUED)

2.3 ROQ-Tuf C550, C620 EN C690
Struktuur en Drukhouer Kwaliteite

2.3.1 Hittebehandeling
ROQ Tuf C Grade is watergeblus en getemper teen 480°C of hoër.

2.3.2 Dikte Beperking
ROQ-Tuf C550 - 38 mm maks
ROQ-Tuf C620 - 38 mm maks
ROQ-Tuf C690 - 32 mm maks

2.3.3 Chemiese Samestelling
(Gietpotanalise %)

2.3 ROQ-Tuf C550, C620 AND C690
Structural and Pressure Vessel Qualities

2.3.1 Heat Treatment
ROQ-Tuf C Grades are water quenched and tempered at 480°C or higher.

2.3.2 Thickness Limitations
ROQ-Tuf C550 - 38 mm max
ROQ-Tuf C620 - 38 mm max
ROQ-Tuf C690 - 32 mm max

2.3.3 Chemical Composition
(Ladle Analysis %)

	C	Mn	P	S	Si	B
Struktuur Kwaliteit Structural Quality	maks 0,20 max	maks 1,35 max	maks 0,040 max	maks 0,050 max	0,15 - 0,30	0,0005 min
Drukhouer Kwaliteit Pressure Vessel Quality	maks 0,20 max	maks 1,35 max	maks 0,035 max	maks 0,040 max	0,15 - 0,30	0,0005 min

Opmerkings:
(i) Vir ROQ-Tuf C690 is die maks. Mn. 1,50%
(ii) ROQ-Tuf C550 19 mm dik kan sonder Boron voorsien word.

Notes:
(i) For ROQ-Tuf C690 the max. Mn 1,50%
(ii) ROQ-Tuf C550 19 mm thick can be supplied without Boron.

2.3.4 Meganiese eienskappe

2.3.4 Mechanical properties

	ROQ-TUF STRUKTUUR/STRUCTURAL			ROQ-TUF DRUKHOUER/PRESSURE VESSEL		
	GRADE			GRADE		
	C 550	C 620	C 690	C 550	C 620	C 690
Min Vloeisterkte (0,2% afwykmetode) MPa Min Yield Strength (0,2% offset) MPa.	550	620	690	550	620	690
Treksterkte Min MPa Tensile Strength Min MPa	655	690	760	655	690	760
(1) Verlenging in 50 mm Min % Elongation in 50 mm Min %	18			18		
Buigtoetse Bend Tests	Op Aansoek/On Application			Op Aansoek/On Application		
Slagtoetse Impact Tests	Op Aansoek/On Application			Op Aansoek/On Application		

Opmerking
(1) Verminderings van 1,25% moet gemaak word vir elke afname van 0,8mm van die gespesifiseerde dikte 8 mm tot 'n maksimum vermindering van 3%.

Note
(1) Deductions of 1,25% shall be made for each decrease of 0,8 mm of the specified thickness 8 mm up to a max deduction of 3%.

2.3.5 Bestellings moet geëndosseer word "struktuur of drukhouer".

2.3.5 Orders must be endorsed "structural or pressure vessel".

2.4 ROQ-tuf AD 690
Struktuur en drukhouer kwaliteite

2.4.1 Hittebehandeling
ROQ-tuf AD690 is watergeblus en getemper teen 620°C of hoër.

2.4.2 Dikte beperking
32 mm maksimum

2.4.3 Chemiese samestelling
(Gietpotanalise %)

C	Mn	P	S	Si	Mo	B
0,12 - 0,21	0,45 - 0,70	0,035 Maks Max	0,040 Maks Max	0,20 - 0,35	0,50 - 0,65	0,001 - 0,005

2.4.4 Meganiese eienskappe
Struktuur Staal - soos per ekwivalente spesifikasie ASTM A 514 Grade J.
Drukhouer Staal - soos per ekwivalente spesifikasie ASTM. A 517 Grade J.

2.4.5 Bestellings moet geëndosseer word
ROQ-Tuf AD 690 (Struktuur) of
ROQ-tuf AD 690 (Drukhouer)

2.5 ROQ-tuf AE 690
Struktuur en drukhouer kwaliteite

2.5.1 Hittebehandeling
ROQ-tuf AE 690 is watergeblus en getemper teen 620°C of hoër.

2.5.2 Dikte beperkings
50 mm maksimum

2.5.3 Chemiese samestelling
(Gietpotanalise %)

C	Mn	P	S	Si	Ni	Mo	B
0,12 - 0,21	0,45 - 0,70	0,035 Maks Max	0,040 Maks Max	0,20 - 0,35	1,20 - 1,50	0,45 - 0,60	0,001 - 0,005

2.5.4 Meganiese eienskappe
Struktuur Staal - soos per ekwivalente spesifikasie - ASTM A 514 Grade M.
Drukhouer Staal - soos per ekwivalente spesifikasie - ASTM A517 Grade M.

2.5.5 Bestellings moet geëndosseer word.
ROQ-tuf AE 690 (struktuur) of
ROQ-tuf AE 690 (drukhouer)

2.4 ROQ-tuf AD 690
Structural and pressure vessel qualities

2.4.1 Heat Treatment
ROQ-tuf AD690 is water quenched and tempered at 620°C or higher.

2.4 ness Limitation
maximum

2.4.3 ical composition
(Ladle Analysis %)

2.4.4 Mechanical properties
Structural Steel - as per equivalent specif' ation ASTM A 514 Grade J.
Pressure Vessel Steel - as per equivalent specification ASTM. A 517 Grade J.

2.4.5 Orders must be endorsed -
ROQ-Tuf AD690 (Structural) or
ROQ-tuf AD690 (Pressure vessel)

2.5 ROQ-tuf AE 690
Structural and pressure vessel qualities

2.5.1 Heat treatment
ROQ-tuf AE 690 is water quenched and tempered at 620°C or higher.

2.5.2 Thickness limitation
50 mm maximum

2.5.3 Chemical analysis
(Ladle Analysis %)

2.5.4 Mechanical properties
Structural Steel - as per equivalent specification - ASTM A 514 Grade M.
Pressure Vessel Steel - as per equivalent specification - ASTM A517 Grade M.

2.5.5 Orders must be endorsed -
ROQ-tuf AE 690 (Structural) or
ROQ-tuf AE 690 (Pressure vessel)

RECEIVED

GEROLLERBLUSTE EN GETEMPERDE GROFPLAAT EN PLATBLOKKE

ROLLER QUENCHED AND TEMPERED PLATES AND SLABS

2 KWALITEIT (VERVOLG)
QUALITY (CONTINUED)

2.6 ROQ-TUF AF690
Struktuur en drukhouer kwaliteite

2.6.1 Hittebehandeling
ROQ-Tuf AF 690 is watergeblus en getemper teen 620°C of hoër.

2.6.2 Dikte Beperkings
Struktuur - 150 mm maks
Drukhouer - 100 mm maks

2.6.3 Chemiese Samestelling
(Gietpotanalise %)

2.6 ROQ-TUF AF690
Structural and pressure vessel quality

2.6.1 Heat Treatment
ROQ-Tuf AF 690 is water quenched and tempered at 620°C or higher.

2.6.2 Thickness Limitations
Structural - 150 mm max
Pressure Vessel - 100 mm max

2.6.3 Chemical Composition
(Ladle analysis %)

C	Mn	P	S	Si	Ni	Cr	Mo	B
0,12/0,21	0,45/0,70	0,035 Maks Max	0,040 Maks Max	0,20/0,35	1,20/1,50	0,85/1,20	0,45/0,60	0,001/0,005

2.6.4 Meganiese Eienskappe
Struktuur Staal - soos per ekwivalente spesifikasie - ASTM A514 Grade P.
Drukhouer Staal - soos per ekwivalente spesifikasie - ASTM A517 Grade P.

2.6.5 Bestellings moet ge-endosseer word -
ROQ-tuf AF 690 (Struktuur) of
ROQ-tuf AF 690 (Drukhouer)

2.6.4 Mechanical Properties
Structural Steel - as per equivalent specification - ASTM A514 Grade P.
Pressure Vessel Steel - as per equivalent specification - ASTM A517 Grade P.

2.6.5 Orders must be endorsed -
ROQ-tuf AF 690 (Structural) or
ROQ-tuf AF 690 (Pressure Vessel).

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2.7 SPESIFIKASIES VIR SLYTBESTANDE KWALITEITE

Yskor se gerollerbluste en getemperde slytbestande plate/platblokke word vervaardig van getemde fynkorrel staal. Die analiise en hittebehandeling lewer 'n meer homogene produk met hoër hardheid en 'n beter dienslewe as "soos gewalste" slytbestande staal.

2.7 SPECIFICATIONS FOR ABRASION RESISTING QUALITIES

Iscor's roller quenched and tempered abrasion resisting plates/slabs are produced from fully killed fine-grained steel. The analysis and heat treatment produce a more uniform product with higher hardness and improved service life as compared to "as rolled" abrasion resisting steels.

KWALITEIT QUALITY	BRINELL HARDHEID/ HARDNESS (MIN.)	MAKSIMUM DIKTE/ MAXIMUM THICKNESS (mm)	CHEMIESE SAMESTELLING % (GIETPOTANALISE) CHEMICAL COMPOSITION % (LADLE ANALYSIS)								
			C	Mn	P Maks/ Max.	S Maks/ Max.	Si	B	Mo	Ni	Cr
ROQ-Last C321	321	32	0,28 Maks/ Max.	1,50 Maks/ Max.	0,040	0,050	0,20/ 0,60	0,0005 Min.	-	-	-
ROQ-last (a) C340	340	25									
ROQ-last AH321	321	75	0,25/ 0,32	0,40/ 0,65	0,035	0,040	0,20/ 0,35	-	0,15/ 0,25	-	0,80/ 1,15
ROQ-last AH340	340	50									
ROQ-last AH360	360	38									-
ROQ-last (b) AH 400	400	25									
ROQ-last AD321	321	32	0,12/ 0,21	Dieselfde as/Same as ROQ-tuf - AD690						Analise Alleen/ Analysis Only	
ROQ-last AD340	340	25		0,45/ 0,70	0,035	0,040	0,20/ 0,35	0,001/ 0,005	0,50/ 0,65	-	-
ROQ-last AD360	360	12									
ROQ-last AE 321	321	50	0,12/ 0,21	Dieselfde as/Same as ROQ-tuf - AE690						Analise Alleen/ Analysis Only	
ROQ-last AE340	340	38		0,45/ 0,70	0,035	0,040	0,20/ 0,35	0,001/ 0,005	0,45/ 0,60	1,20/ 1,50	-
ROQ-last AE360	360	25									
ROQ-last AF321	321	100	0,12/ 0,21	Dieselfde as/Same as ROQ-tuf - AF690						Analise Alleen/ Analysis Only	
ROQ-last AF340	340	50		0,45/ 0,70	0,035	0,040	0,20/ 0,35	0,001/ 0,005	0,45/ 0,60	1,20/ 1,50	0,85/ 1,20
ROQ-last AF360	360	38									

OPMERKINGS:
1. Klante moet daarop gewys word dat 'n sekere mate van kromtrekking verwag kan word wanneer plate gesny word (deur klant) omdat die lae temperatuur benodig nie alle oorblywende interne spanning verwyder nie.
2. ROQ-last C340 - min. dikte 8,0 mm.
3. ROQ-last AH400 - min. dikte 10,0 mm.

NOTES:
1. Customers should be told that some distortion may occur when plates are cut (by customer) because the low tempering temperature necessary does not remove all residual internal stresses.
2. ROQ-Last C340 - Min. Thickness 8,0 mm.
3. ROQ-Last AH400 - Min. Thickness 10,0 mm.

3. TOLERANSIES / TOLERANCES

3.1 MASSATOLERANSIE

Toelaatbare afwykings in dikte en massa vir reghoekige gesnyde plate/platblokke wanneer bestel volgens dikte.

3.1 MASS TOLERANCE

Permissible variations in thickness and mass for rectangular sheared plates/slabs when ordered to thickness.

GESPESIFISEERDE DIKTE (mm)/ SPECIFIED THICKNESS (mm)	TOELAATBARE PLUS AFWYKING VAN DIE GEMIDDELDE MASSA VAN LOTTE UITGEDRUK AS 'N PERSENTASTE VAN NOMINALE MASSA/ PERMISSIBLE EXCESS VARIATION FROM AVERAGE MASS OF BATCHES EXPRESSED AS A PERCENTAGE OF NOMINAL MASS					
	WYDTES/WIDTHS (mm)					
	1000- 1200	>1200- 1500	>1500- 1800	>1800-<2100	2100- 2400	>2400- 2800
6,5	-	7,0	8,0	8,5	-	-
8,0	6,0	6,0	7,0	8,0	-	-
10,0	5,0	6,0	6,0	7,0	8,0	8,5
11,5	4,5	5,0	6,0	6,0	7,0	8,0
12,5	4,0	4,5	5,0	6,0	6,0	7,0
16,0	4,0	4,0	4,5	5,0	6,0	6,0
19,0	4,0	4,0	4,0	4,5	5,0	6,0
25,0	3,5	4,0	4,0	4,0	4,5	5,0
50,0	3,5	3,5	4,0	4,0	4,0	4,5
75,0	3,5	3,5	3,5	4,0	4,0	4,5
100,0	3,5	3,5	3,5	3,5	4,0	4,0
150,0	3,0	3,0	3,0	3,0	3,0	3,0

OPMERKINGS

1. Nie-standaard wydtes en dikktes - alleenlik op navraag
2. Vir wydte tot dikte beperkings - verwys bladsy P2, para.4.
3. Die term "Lot" beteken al die grofplate van dieselfde lengte, wydte en dikte wat in elke besending verteenwoordig is.
4. Toelaatbare afwyking onder gespesifiseerde dikte 0,3 mm.
5. Die toelaatbare oormassa van enkel grofplate/ platblokke is $1\frac{1}{3}$ keer dit van die getalle in bogenoemde tabel.
6. Dikte word omgereken in massa per eenheid van oppervlakte deur middel van die volgende formule: 1vk meter grofplaat/platblok van 10 mm dik = 7,850 kg.

NOTES

1. Non standard widths and thicknesses - on application only.
2. For width to thickness limitations - refer page P2, par.4.
3. The term "Batch" means all the plates of the same length, width and thickness represented in each consignment.
4. Permissible variation under specified thickness 0,3 mm.
5. Permissible over mass of single plates/ slabs is $1\frac{1}{3}$ times the amounts given in the above table.
6. Thickness is converted to mass per unit of area by the following formula: 1sq. metre of plate/slab of 10 mm thick = 7,850 kg.

3.2 WYDTE- EN LENGTE-TOLERANSIES

Die toelaatbare afwyking onder die gespesifiseerde wydte en lengte is 6 mm. Die toelaatbare afwyking oor die gespesifiseerde wydte en lengte is soos volg:-

3.2 WIDTH AND LENGTH TOLERANCES

The permissible variation under specified width and length is 6 mm. The permissible variation over specified width and length is as follows:-

GESPESIFISEERDE AFMETINGS / SPECIFIED DIMENSIONS		TOLERANSIES OOR GESPESIFISEERDE WYDTE EN LENGTE VIR DIKTES IN MILLIMETERS / TOLERANCES OVER SPECIFIED WIDTH AND LENGTH FOR THICKNESSES IN MILLIMETRES							
		6,0 - 8,0		> 8,0 16.0		> 16,0 20,0		> 20,0 - 100,0	
LENGTE (m) LENGTH (m)	WYDTE (mm) WIDTH (mm)	WYDTE WIDTH	LENGTE LENGTH	WYDTE WIDTH	LENGTE LENGTH	WYDTE WIDTH	LENGTE LENGTH	WYDTE WIDTH	LENGTE LENGTH
2,0 - 3,0	<1 500	10	13	11	16	13	19	16	25
	1 500 - <2 100	11	16	13	17	16	22	19	25
	2 100 - 2 400	13	19	16	22	19	25	25	29
	>2 400 - 2 800	16	22	19	25	22	29	29	32
3,1 - 6,0	<1 500	10	19	13	22	16	25	19	29
	1 500 - <2 100	13	19	16	22	19	35	22	32
	2 100 - 2 400	14	22	17	24	21	29	25	35
	>2 400 - 2 800	16	25	19	29	22	32	29	35
6.1 - 9,0	<1 500	10	35	13	29	16	32	19	38
	1 500 - <2 100	13	25	16	29	19	32	22	38
	2 100 - 2 400	14	25	17	32	22	35	25	38
	>2 400 - 2 800	17	29	22	32	25	35	32	44
9,1 - 12,0	<1 500	11	29	13	32	16	35	19	41
	1 500 - <2 100	13	32	16	35	19	38	22	41
	2 100 - 2 400	14	32	19	35	22	41	25	34
	>2 400 - 2 800	19	35	22	38	25	41	32	48
12,1 - 13,0	<1 500	11	32	13	38	16	41	19	48
	1 500 - <2 100	13	32	16	38	19	41	22	48
	2 100 - 2 400	16	35	19	38	22	41	25	48

3. TOLERANSIES (VERVOLG)/
TOLERANCES (CONTINUED)

3.3.1 PLATHEIDSTOLERANSIES
Die toelaatbare afwyking in die plat oppervlak vir plate tot 3,7 m in lengte of vir enige 3,7 m van langer plate, is soos aangedui in die volgende tabel:-

3.1.1 FLATNESS TOLERANCES
The Permissible variation from flat surface for plates up to 3,7 m in length or for any 3,7 m of longer plates, are as shown in the following table:-

GESPESIFISEERDE DIKTE/ SPECIFIED THICKNESS mm	PLATHEIDSTOLERANSIE VIR GESPESIFISEERDE WYDTES (mm) (MAKSIMUM AFWYKING VAN HORISONTALE PLAT OPPERVLAK) FLATNESS TOLERANCE FOR SPECIFIED WIDTHS (mm) (MAXIMUM DEVIATION FROM HORIZONTAL FLAT SURFACE)						
	1000 - <1220	1220 - <1520	1520 - <1830	1830 - <2130	2130 - <2440	2440 - <2740	2740 - 2800
6,0 - < 6,5	29	35	48	-	-	-	-
6,5 - < 9,5	24	29	35	44	-	-	-
9,5 - < 13,0	22	24	24	29	33	-	-
13,0 - < 19,0	19	21	22	25	29	-	-
19,0 - < 25,0	19	22	22	24	25	29	33
25,0 - < 50,0	16	19	21	22	24	25	25
50,0 - 100,0	14	18	19	19	19	19	22

OPMERKING:
Die platheidsafwyking oor die wydte behoort nie die getabuleerde waardes vir die gespesifiseerde wydte te oorskry nie.

NOTE:
The flatness variation across the width should not exceed the tabular amount for the specified width.

3.3.2 TOELAATBARE AFWYKINGS IN GOLWERIGHEID VIR REGHOEKIGE PLATE
Golwerigheid dui die maksimum afwyking aan van die oppervlak van die plaat van 'n vlak parallel met die oppervlak van die meetpunt en aangrensend aan die oppervlak van die plaat by elk van die twee aanliggende golfspitse, wanneer die plaat op 'n plat horisontale oppervlak rus, soos gemeet in 'n vermeerdering van minder as 3,7 m in lengte.

Die golwerigheidstoleransie is 'n funksie van die platheidstoleransie, soos verkry uit die tabel onder 3.3.1.

PERMISSIBLE VARIATIONS IN WAVINESS FOR RECTANGULAR PLATES
Waviness denotes the maximum deviation of the surface of the plate from a plane parallel to the surface of the point of measurement and contiguous to the surface of the plate at each of the two adjacent wave peaks, when the plate is resting on a flat horizontal surface, as measured in an increment of less than 3,7 m in length.

The waviness tolerance is a function of the flatness tolerance, as obtained from the table under 3.3.1.

PLATHEIDSTOLERANSIE mm (UIT TABEL ONDER PAR. 3.3.1) FLATNESS TOLERANCE mm (FROM TABLE UNDER PAR. 3.3.1)	GOLWERIGHEIDSTOLERANSIE mm (WANNEER GETAL GOLWING IN 3,7 m IS) WAVINESS TOLERANCE mm (WHEN NUMBER OF WAVES IN 3,7 m IS)						
	1	2	3	4	5	6	7
13	13	10	8	5	5	3	2
14	14	11	8	6	5	3	2
16	16	13	10	6	5	3	2
18	18	13	10	8	5	5	2
19	19	14	11	8	6	5	2
21	21	16	11	8	6	5	2
22	22	17	13	10	6	5	2
24	24	17	13	10	8	6	5
25	25	19	14	11	8	6	5
29	29	22	16	13	10	6	5
32	32	24	17	13	10	8	6
33	33	25	17	13	10	8	6
35	35	27	19	14	11	8	6
38	38	29	22	16	13	10	6
41	41	32	24	17	13	10	8
44	41	33	25	19	14	11	8
48	48	37	27	21	14	11	8
51	51	38	29	22	16	13	10
57	57	43	32	24	17	14	10
60	60	46	33	25	19	14	11
67	67	51	38	29	21	16	11

4. OOR- OF ONDERVERSENDINGSTOLERANSIE / OVER- OR UNDER DESPATCH TOLERANCE

Vir hoeveelhede van plate bestel, of dit op 'n tonnemaat of aantal plate basis is, word die reg voorbehou om binne die toleransies hieronder gespesifiseer te lewer:-

For quantities of plates ordered per item whether on a tonnage or number of plates basis the right is reserved to supply within the tolerances specified below:-

MASSA VAN ITEMS BESTEL OF DIE BEREKENDE MASSA VAN DIE AANTAL PLATE BESTEL / MASS OF ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF PLATES ORDERED	OORMAAT (+)/ONDERMAAT (-) OVERAGE (+)/UNDERAGE (-)	
TON(S)	TON(S)	
2 - < 5	+ 1	- 1
5 - < 10	+ 2	- 3
10 - < 20	+ 3	- 4
20 - < 40	+ 4	- 5
40 - < 100	+ 4	- 6
≥ 100	+ 6	-10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Beperkings op bogenoemde toleransies - verwys bladsy P4, paragraaf 7.

Where a minimum or maximum quantity is specified, the overage or underage will be the total of the applicable plus and minus tolerance.
Restrictions on the above tolerances - refer page P4, paragraph 7.

5. PRODUK INLIGTING/ PRODUCT INFORMATION

5.1 Alle Gerollerbluste en Getemperde Grofplaat word Ultrasonies getoets volgens BSI DD21 Graad C + 3. Ander Grade van Ultrasoniese toetse kan op aansoek voorsien word.

5.1 All Roller Quenched and Tempered Plates are Ultrassonically tested to BSI DD21 Grade C + 3. Other ultrasonic testing grades can be supplied on application.

5.2 MERKING:- Sommige spesifikasies word voor versending deur die Werke met die volgende kleurkodes gemerk:-

5.2 MARKING:- Certain specifications are marked with a colour code by the Works prior to dispatch as follows:-

Koolstof Grade	/	Carbon Grades
ROQ - TUF C 410		Blou/Bruin/Blou / Blue/Brown/Blue
ROQ - TUF C 500		Blou/Rooi/Blou / Blue/Red/Blue
ROQ - TUF C 550		Blou/Groen/Blou / Blue/Green/Blue
ROQ - TUF C 620		Blou/Swart/Blou / Blue/Black/Blue
ROQ - TUF C 690		Blou/Geel/Blou / Blue/Yellow/Blue
ROQ - LAST C 321		Blou/Wit/Blou / Blue/White/Blue
ROQ - LAST C 340		Blou/Grys/Blou / Blue/Grey/Blue
Allooi Grade		**Alloy Grades**
ROQ - TUF AD 690		Rooi/Groen/Geel / Red/Green/Yellow
ROQ - TUF AE 690		Rooi/Blou/Geel / Red/Blue/Yellow
ROQ - TUF AF 690		Rooi/Bruin/Geel / Red/Brown/Yellow
ROQ - LAST AD 321		Rooi/Groen/Wit / Red/Green/White
ROQ - LAST AD 340		Rooi/Groen/Grys / Red/Green/Grey
ROQ - LAST AD 360		Rooi/Groen/Swart / Red/Green/Black
ROQ - LAST AE 321		Rooi/Blou/Wit / Red/Blue/White
ROQ - LAST AE 340		Rooi/Blou/Grys / Red/Blue/Grey
ROQ - LAST AE 360		Rooi/Blou/Swart / Red/Blue/Black
ROQ - LAST AF 321		Rooi/Bruin/Wit / Red/Brown/White
ROQ - LAST AF 340		Rooi/Bruin/Grys / Red/Brown/Grey
ROQ - LAST AF 360		Rooi/Bruin/Swart / Red/Brown/Black
ROQ - LAST AH 321		Rooi/Geel/Wit / Red/Yellow/White
ROQ - LAST AH 340		Rooi/Geel/Grys / Red/Yellow/Grey
ROQ - LAST AH 360		Rooi/Geel/Swart / Red/Yellow/Black
ROQ - LAST AH 400		Rooi/Geel/Bruin / Red/Yellow/Brown

DECLASSIFIED

S.P.E. 115

YSKOR BEPERK ISCOR LIMITED

VLOERPLAAT

FLOORPLATE

DECLASSIFIED

VLOERPLAAT

A. VOORWOORD

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.

3. Tensy anders bestel, is alle items onderworpe aan 'n oormaat of ondermaat verwys bladsy S1 paragraaf 2

4. Vloerplaat word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die geykte massameter/massameterbrug by the Werke. Enige verwysing na die getal plate op die faktuur of vragbrief is slegs vir inligting.

5. Tensy anders vermeld, is ekstras en aftrekkings hierin gekwoteer per metrieke ton. Elke ekstra of aftrekking is afsonderlik en uitdruklik.

6. Normale toetsing en inspeksie, soos in die verskillende spesifikasies uiteengesit, word uitgevoer.

7. Pryse en ekstras is dié wat op die versendingsdatum geld, en is onderworpe aan verandering sonder kennisgewing.

8. Wanneer Vloerplaat bestel word, moet klante altyd die eindgebruik spesifiseer.

9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie, behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys van die gewysigde bestelling weer bepaal.

10. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

FLOOR PLATE

A. PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - refer page S1 paragraph 2

4. Floor plates are sold at a price per metric ton (1 000 kilograms) on gross mass as recorded on the assized mass meter/mass meterbridge at the Works. Any reference to the number of plates on the invoice or consignment note is for information only.

5. Unless otherwise stated, extras and deductions quoted herein are per metric ton. Each extra or deduction is separate and distinct.

6. Normal testing and inspection as outlined in the various specifications are carried out.

7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.

8. When ordering Floor plates customers should state the end-use.

9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation, in writing. Should an order be modified, the order as amended, will be repriced.

10. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD

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3.	Mass tolerance	S1
4.	Overage or underage tolerance	S1

YSKOR BEPERK ISCOR LIMITED

DOCUMENT CONTROLLED

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - Spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Eind-gebruik

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/Aftrekkings
3. Wydte en Dikte
4. Lengte
5. Vastrappatroonekstras
6. Kwaliteit
7. Inspeksie en/of bywoning van Toetse
8. Beperking op oormaat/ondermaat
9. Invoerheffing (R10-25/Ton)

C. PWV-GEBIED

Bestaan uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) End use

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/Deductions
3. Width and Thickness
4. Length
5. Vastrap pattern extras
6. Quality
7. Inspection and/or witnessing of Tests
8. Restriction on overage/underage
9. Import Levy R10-25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging en Westonarea and Wonderboom.

1981-10-01

VLOERPLAAT / FLOOR PLATE

A. PRYSE/PRICES

BASISPRYS:

(a) PWV[1])-Gebied..... R378-50
v.o.s. Yskorwerke Vanderbijlpark (Sylvn 1414 Bylkor)

(b) Buite PWV[1])-Gebied..... R378-50
v.o.s. Germiston plus spoorvervoer

1) Verwys kontrolelys Par. C

1. BASIS PRICE:

a) PWV[1])-Area..... R378-50
f.o.r. Iscor Works Vanderbijlpark (Siding 1414 Bylkor)

b) Outside PWV[1])-Area.....R378-50
f.o.r. Germiston plus haulage.

1) Refer check list Par. C

2. HOEVEELHEIDSEKSTRAS/-AFTREKKINGS

2.1 ITEMEKSTRAS/-AFTREKKINGS
Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die Korporasie uitgereik t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2. QUANTITY EXTRAS/DEDUCTIONS

2.1 ITEM EXTRAS/DEDUCTIONS
The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

ITEM (TON/TONS)	EKSTRA/EXTRA R.c./Ton	AFTREKKING/ DEDUCTION R.c./Ton
2 - 5[1])	71-90	
5 - 10	45-45	
10 - 20	22-65	
20 - 40	11-35	
40 - 80	5-65	
80 - 150	0-00	0-00
150 - 300		3-75
300 - 500		5-63
⩾ 500		11-35

1) Slegs beskikbaar in Handelskwaliteit in wydtes van 1000 & 1200 mm

1) Available only in Commercial Quality in widths of 1000 & 1200 mm

3. GROOTTE EKSTRAS

3.1 STANDAARD WYDTE EN DIKTE-EKSTRAS

3. SIZE EXTRAS

3.1 STANDARD WIDTH AND THICKNESS EXTRAS

STANDAARDDIKTE/ STANDARD THICKNESS	STANDAARD WYDTES/STANDARD WIDTHS				
	600 -<800	800 -<925	925 -<1000	1000 -<1200	*1200 -<1500
3,0	21 - 10	13 - 85	11 - 90	9 - 15	8 - 30
4,5	23 - 65	16 - 40	14 - 45	11 - 70	10 - 15
6,0	26 - 25	18 - 95	16 - 95	14 - 30	11 - 90
8,0	29 - 70	22 - 35	20 - 40	17 - 75	14 - 30

* Maksimum Wydte 1225 mm

* Maximum Width 1225 mm

3.2 NIE-STANDAARDWYDTE-EKSTRAS
Nie-standaard trappe van 5 mm.....R0-85

3.2 NON-STANDARD WIDTH EXTRAS
Non-standard increments of 5 mm.....R0-85

3.3 LENGTE EKSTRAS

3.3 LENGTH EXTRAS

STANDAARD LENGTES (mm)/STANDARD LENGTHS (mm)	EKSTRA/EXTRA (R.c./ton)
1000 - 1700	0-30
1800	23-40
1900	24-95
2000	31-30
2100 - 2300	24-20
2400	20-80
2500 - 2900	23-40
3000	20-30
5100 - 5900	22-10
6000 - 9100	19-75

3.4 NIE-STANDAARD LENGTES
Ander lengtes as in trappe van 100 mm.....R3-35

3.4 NON STANDARD LENGTHS
Other lengths than in increments of 100 mm..... R3-35

YSKOR BEPERK ... ISCOR LIMITED

VLOERPLAAT — FLOOR PLATE

4. VASTRAP PATROONEKSTRAS

4. VASTRAP PATTERN EXTRAS

DIKTE (PATROON UITGESLUIT) (mm) THICKNESS (UNDER PATTERN) (mm)	EKSTRA/EXTRA R.C./Ton
3,0	32-05
4,5	28-10
6,0	24-25
8,0	20-25

Opmerking: Hierdie ekstras geld bo en behalwe die ekstras in para. 3.1

Note: These extras are over and above extras mentioned in par. 3.1

5. KWALITEITSEKSTRAS

5. QUALITY EXTRAS

KODE/ CODE	BESKRYWING/ DESCRIPTION	EKSTRA/EXTRA R.C./TON
123	Handelskwaliteit/ 3,0 mm C.0,10 maks./max. Commercial Quality: 4,5 mm C.0,25 maks./max.	0-00 0-00
126	Lloyds Gr.A (Min. 20 Ton(s)/Item.)	10-25
186	BS 4360 Gr. 43 A.	7-50
	*CME 9 Simbool/Symbol 8:	
512	3,0 - 6,0 mm (Min. 10 Ton(s)/Item.)	38-75
[illegible]	8,0 mm	7-50
	*Ekstra vir bywoning van toetse en oppervlak inspeksie deur die SAS inspekteur: / *Extra for witnessing of tests and inspection by SAR inspector:	
3313	1) Bywoning van roetine werke toetse / 1) Witnessing of routine works tests	2-10
3329	2) Oppervlak inspeksie / 2) Surface Inspection	4-20

6. EKSTRAS VIR BEPERKING OP OOR- OF ONDERMAAT TOELATING
(INDIEN OP BESTELLING GESPESIFISEER)
(Verwys bladsy S1 par. 2)
EXTRAS FOR LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE
(WHEN SPECIFIED ON ORDER)
(Refer page S.1 par. 2)

KODE/ CODE			R.C.
2408	(i) 50% beperking van standaard oor- of ondermaat toelating.....	(i) 50% limitation on standard over- age or underage allowance	8-80
2409	§(ii) Wanneer 2½% oor- of ondermaat van item massa gespesifiseer word....	§(ii) When 2½% overage or underage of item mass is specified.....	13-55
2440	(iii)(a) Vir gespesifiseerde minimum hoeveelhede.....	(iii)(a) For specified minimum quantities	3-50
2293	(b) Vir gespesifiseerde maksimum hoeveelhede..... (Uitsluitende ekstras vir beperkings op oor- of ondermaat)	(b) For specified maximum quantity (Excluding extras for restrictions on overage or underage)	3-50

§ Slegs van toepassing op items onder 100 ton

§ Applicable only to items under 100 tons

1982-01-01

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1981-10-01

UNCONTROLLED

B. STANDAARDVERVAARDIGINGSPRAKTYK
STANDARD MANUFACTURING PRACTICE

1. VLOERPLAAT
FLOOR PLATE

1.1 Patroon en Omvang
Vloerplaat word geproduseer in die "Vastrap"- patroon in die volgende groottes:

1.1.1 Dikte (Patroon uitgesluit)
3,0; 4,5; 6,0 en 8,0 mm

1.1.2 Dikte van patroon bokant gewone dikte
= 1,6 mm nominaal

1.1.3 Maksimum lengte: 9100 mm
Maksimum wydte : 1225 mm

1.2 Berekende massa

Dikte (mm) (Patroon uitgesluit)	kg/m^2
3,0	26,00
4,5	37,78
6,0	49,55
8,0	65,40

1.3 Massatoleransie

Die toelaatbare afwyking van die gemiddelde massa van lotte[1]) uitgedruk as persentasie van nominale massa.

1.1 Pattern and Scope
Floor Plates are produced to the "Vastrap" pattern in the following sizes:

1.1.1 Thickness (Under pattern)
3,0; 4,5; 6,0 and 8,0 mm

1.1.2 Pattern raised over plain thickness
= 1,6 mm nominal

1.1.3 Maximum length: 9100 mm
Maximum width : 1225 mm

1.2 Calculated mass

Thickness (mm) (Under pattern)	kg/m^2
3,0	26,00
4,5	37,78
6,0	49,55
8,0	65,40

1.3 Mass Tolerance

Permissible variation for average mass of batches[1]) expressed as a percentage of nominal mass

DIKTEPATROON UITGESLUIT (mm) THICKNESS UNDER PATTERN (mm)	% ONDER/ UNDER (-)	% OOR/ OVER (+)
3,0	5	8
4,5	5	8
6,0	5	6
8,0	5	5½

Die toelaatbare oormassa van enkel vloerplate is 1 1/3 keer dié van die plus toleransie in bogenoemde tabel.

[1]) Die term 'lot' beteken al die plate van dieselfde lengte wydte en dikte wat in elke besen[illegible] verteenwoordig word.

Permissible over mass of single floor plates is 1 1/3 times the plus tolerance in the above table.

[1]) The term "batch" means all the plates of the same length, width and thickness represented in each consignment.

2. OOR- OF ONDERMAAT
Vir hoeveelhede van plate bestel, of dit op tonnemaat of aantal plate basis is, word die reg voorbehou om binne die toleransies hieronder gespesifiseer te lewer:-

2. OVERAGE OR UNDERAGE
For quantities of plates ordered per item whether on a tonnage or number of plates basis the right is reserved to supply within the tolerances specified below:

Massa van items bestel of die berekende massa van die aantal plate bestel	Oormaat/Overage (+)
Mass of items ordered or the calculated mass of the number of plates ordered	Ondermaat/Underage (-)
Ton (s)	Ton/ Tons
2 - < 5	+ 1 - 1
5 - < 10	+ 2 - 3
10 - < 20	+ 3 - 4
20 - < 40	+ 4 - 5
40 - < 100	+ 4 - 6
≥ 100	+ 6 - 10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van toepaslike plus en minus toleransies wees. Beperkings op bogenoemde toleransies - verwys bladsy P2 par. 6.

Where a minimum or maximum quantity is specified the overage or underage will be the total of the applicable plus and minus tolerances. Restrictions on the above tolerances - refer page P2 par. 6.

DECLASSIFIED

S.P.E. 118

YSKOR BEPERK ISCOR LIMITED

WARMBAND PLAATDIKTES
ROLLE — SMALBAND — LENGTES

HOTSTRIP PLATE THICKNESSES
COILS — SLIT STRIP — LENGTHS

DECLASSIFIED

WARMBAND PLAATDIKTES

VOORWOORD

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.
3. Tensy anders bestel, is alle items onderworpe aan 'n oormaat of ondermaat - verwys bladsy S8 par. 5.1.
4. Materiaal gedek deur hierdie S.P.E. word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die geykte massameter/massameterbrug by die Werke. Enige verwysing na die getal plate/rolle op die faktuur of vragbrief is slegs vir inligting.
5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.
6. Normale toetsing en inspeksie, soos in die verskillende spesifikasies uiteengesit, word uitgevoer. Wanneer bykomende inspeksie en/of toetsing verlang word sal 'n ekstra gehef word - verwys bladsy P15-P17.
7. Pryse en ekstras is die wat op die versendingsdatum geld, en is onderworpe aan veranderings sonder kennisgewing.
8. Wanneer bestel word, moet klante altyd die eindgebruik spesifiseer.
9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.
10. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.
11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

HOTSTRIP PLATE THICKNESSES

PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.
2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.
3. Unless ordered to the contrary, all items are subject to "overage" or "underage" - refer page S8 par. 5.1
4. Material covered by this S.P.E. are sold at a price per metric ton (1 000 kilograms) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of sheets/coils on the invoice or consignment note is for information only.
5. Extras and deductions quoted herein are per metric ton, unless otherwise stated. Each extra or deduction is separate and distinct.
6. Normal testing and inspection as outlined in the various specifications are carried out. When additional inspection and/or testing is required, extras will be charged - refer page P15-17.
7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.
8. When ordering customers should always state the end use.
9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified the order as amended, will be repriced.
10. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.
11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD:

		BLADSY
A.	PRYSE	
1.	Basisprys	P1
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3.	Grootte-ekstras	P2
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5.	Walsrandrolle	P11 - P13
6.	Verwerkingsekstras/ Metallurgiese vereistes	P14 - P17
7.	Oormaat/Ondermaatekstras	P17
8.	Warmband Plaatdiktes nie gekantsny	P17
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B.	STANDAARDVERVAARDIGINGSPRAKTYK	
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3.	Groottereeks	S2
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2.	Quality	S1 & S2
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YSKOR BEPERK ISCOR LIMITED

S.P.E. 118

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Aflewerингsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK
   (a) Hoeveelheid
      (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - Spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - Sertifiseer
   (g) Oppervlak afwerking
   (h) Eind - Gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Wydte en Dikte
4. Lengte
5. Kwaliteit
6. Spesiale verwerkings/Metallurgiese vereistes
   (i) Verwerking
   (ii) Skoonbyt en olie
   (iii) Rekrig/Hersny/Haaksny
   (iv) Inspeksie
   (v) Toets -/Gietanalise sertifikate
7. Beperking op oor-/ondermaat
8. Verpakkingsekstras
9. Walsrandrolle
10. Invoerheffing (R10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Rodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT
   (a) Quantity
      (total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - Specify
   (g) Surface finish
   (h) End uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Width and Thickness
4. Length
5. Quality
6. Special processing/Metallurgical requirements
   (i) Processing
   (ii) Pickling and oiling
   (iii) Stretcher levelling/ reshearing/resquaring
   (iv) Inspection
   (v) Test/Cast analysis certificates
7. Restriction on over-/underage
8. Packing extras
9. Mill edge coils
10. Import Levy (R10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

1981-10-01 — Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated — 1981-07-03

UNCONTROLLED

WARMBAND PLAATDIKTES

HOTSTRIP PLATE THICKNESSES

A. PRYSE / PRICES

1. **BASISPRYS**
(Gebaseer op Handelskwaliteit warmgewals, kantgesny en nie tot dikte teruggesny nie)

(a) PWV 1) -gebied R378-50
1000 kg v.o.s. Yskorwerke, Vanderbijlpark (Sylyn 1414, Bijlkor) plus padvervoer/ spoorvervoer.

(b) Buite PWV 1) -gebied R378-50
1000 kg v.o.s. Germiston plus spoorvervoer.
1) Verwys kontrolelys par. C.

1. **BASIS PRICE**
(Based on Commercial Quality, hot rolled, side-trimmed and not cut back to thickness)

(a) PWV 1) area R378-50
1000 kg f.o.r. Iscor Works, Vanderbijlpark, (Siding 1414, Bijlkor) plus cartage/ railage.

(b) Outside PWV 1) area R378-50
1000 kg f.o.r. Germiston plus railage.
1) Refer Check List par. C.

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS / QUANTITY EXTRAS AND DEDUCTIONS

2.1 **ITEMEKSTRAS/AFTREKKINGS**
Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op enige enkele bestelling vir versending op 'n keer soos dit die Werke pas, na een bestemming.

2.1 **ITEM EXTRAS/DEDUCTIONS**
The following extras and deductions are applicable to the calculated mass of each item on any one order for dispatch at one time, at Works convenience to one destination.

ITEM 1) TON/TONS	EKSTRA/EXTRA R.c./TON	AFTREKKING/DEDUCTION R.c./TON
2 - < 5	71-90	
5 - < 10	45-45	
10 - < 20	22-65	
20 - < 40	11-35	
40 - < 80	5-65	
80 - < 150	0-00	0-60
150 - < 300		3-75
300 - < 500		5-65
≥ 500		11-35

OPMERKINGS:
Minimum massa per item
(a) Alle materiaal ≤ 1225 mm wyd:
10 ton/item (< 10 ton/item aanvaarbaar. vir Handelskwaliteit gesnyde lengtes in standaard wydtes en diktes alleenlik).

(b) Alle materiaal > 1225 mm wyd:
20 ton/item (< 20 tons/item op aansoek).

NOTES:
Minimum mass per item
(a) All material ≤ 1225 mm wide:
10 tons/item (< 10 tons/item acceptable for Commercial quality, cut lengths in standard widths and thicknesses only).

(b) All material > 1225 mm wide:
20 tons/item (< 20 tons/item on application.

3. GROOTTE-EKSTRAS / SIZE-EXTRAS

3.1 **STANDAARD-WYDTE EN DIKTE-EKSTRAS**

3.1 **STANDARD WIDTH AND THICKNESS EXTRAS**

STANDAARD DIKTE/ STANDARD THICKNESS	STANDAARDWYDTE (mm) (SMALBAND 5 mm TRAPPE, ROLLE EN LENGTES 25 mm TRAPPE)/ STANDARD WIDTH (mm) (SLIT STRIP 5 mm INCREMENTS, COILS AND CUT LENGTHS 25 mm INCREMENTS)									
	SMALBAND IN ROLLE/ SLIT STRIP IN COILS Teruggesny na dikte/ Cut back to thickness			ROLLE EN GESNYDE LENGTES/ COILS AND CUT LENGTHS						
mm	75 < 150	150 < 250	250 < 600	600 < 800	800 < 925	925 < 1000	1000 < 1200	1200 < 1500	1500 < 1800	1800
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
12,0	-	-	-	-	29-15	27-15	24-55	19-05	14-65	10-95
10,0	-	61-30	42-20	33-10	25-75	23-70	21-10	16-70	12-85	8-55
8,0	-	55-00	38-85	29-70	22-35	20-40	17-75	14-30	10-95	6-05
6,0	-	48-80	35-40	26-25	18-95	16-95	14-30	11-90	9-20	4-70
5,0	57-00	45-65	33-70	24-55	17-25	15-30	12-60	10-70	8-25	4-00
4,5	55-85	44-10	32-85	23-65	16-40	14-45	11-70	10-15	7-80	3-70

3. GROOTTE-EKSTRAS (vervolg)
SIZE -EXTRAS (continued)

3.2 NIE-STANDAARDDIKTE-EKSTRAS
Vir diktes tussen twee standaarddiktes is die ekstra vir die standaarddikte (Par. 3.1) waarvoor die hoër ekstra geld, van toepassing, plus die volgende:

3.2 NON-STANDARD THICKNESS EXTRAS
For thicknesses between two standard thicknesses, the extra for the standard thickness (par. 3.1) bearing the higher extra applies, plus the following:

	DIKTE/THICKNESS	NIE-STANDAARDTRAPPE NON-STANDARD INCREMENTS	EKSTRA/ EXTRA
Rolle/Coils Lengtes/Lengths	4,5 mm - 12 mm	0,5 mm 0,1 mm	R.c. 11-95 24-45

3.3 NIE-STANDAARDWYDTE-EKSTRAS
Vir wydtes tussen twee standaardwydtes is die ekstra vir die standaardwydte (par.3.1) waarvoor die hoër ekstra geld, van toepassing, plus die volgende:

(a) Smalband - Nie-standaard trappe van 1 mm R8-85
(b) Fynplaat/Rolle - Nie-Standaard trappe van 5 mm R8-85

3.3 NON-STANDARD WIDTH EXTRAS
For widths between two standard widths, the extra for the standard width (par.3.1) bearing the higher extra applies plus the following:

(a) Slit Strip - Non-standard increments of 1 mm R8-85
(b) Sheets/Coils - Non-Standard increments of 5 mm R8-85

3.4 STANDAARDLENGTE-EKSTRA
Wydtes 600 - 1800 mm

3.4 STANDARD LENGTH EXTRA
Width 600 - 1800 mm

LENGTE IN TRAPPE VAN 100 MM LENGTH BY INCREMENTS OF 100 MM (mm)	EKSTRA EXTRA R.c.	BEPERKINGS/LIMITATIONS			
		DIKTE/THICKNESS (MM)			
		4,5	>4,5-5,0	>5,0-6,0	> 6,0-12,0
		WYDTE/ WIDTH mm	WYDTE/ WIDTH mm	WYDTE/ WIDTH mm	WYDTE/ WIDTH mm
1 000 - 1 700	26-50				
1 800	23-40				
1 900	24-95				
2 000	21-30				
2 100 - 2 300	24-20				
2 400	20-80				
2 500 - 2 900	23-40				
3 000	20-30				
3 100 - 5 900	22-10				
6 000	19-75	600-1300	600-1100	600- 900	
6 100 - 9 000	19-75	1305-1800	1105-1800	905-1800	600- 900
9 100 - 10 000	19-75				
10 100 - 13 800	23-40				> 900-1800

3.5 NIE-STANDAARD LENGTE EKSTRA
Vir nie-standaardlengtes geld die ekstras soos in die standaardlengte tabel (par.3.4) plus die volgende:
Nie-standaard trappe van 5 mm R3-55

3.5 NON-STANDARD LENGTH EXTRA
For non-standard lengths the extras shown in the standard length table (Par. 3.4) apply plus the following:
Non-standard increments of 5 mm..... R3-55

GECONTROLEER

WARMBAND PLAATDIKTES — HOTBAND PLATE THICKNESSES

4. KWALITEITSEKSTRAS / QUALITY EXTRAS

(Aangeduide analises is gietpotanalise) (Indicated analyses are ladle analysis)

4.1 HANDELS KWALITEITE / COMMERCIAL QUALITIES

KODE CODE		EKSTRA/ EXTRA
		R.c.
123	Handelskwaliteit (koolstof 0,15% maks.) Commercial Quality (Carbon 0,15% max.) ≥ 4,5 mm dik/thick	0-00

4.2 KOOLSTOF KWALITEITE / CARBON QUALITIES

KODE CODE		EKSTRA/ EXTRA
		R.c.
098	SAE/AISI 1008 (C 0,10 maks. Mn 0,25 - 0,50)	9-25
099	SAE/AISI 1010 (C 0,08 - 0,13% Mn 0,30 - 0,60)	9-25
184	SAE/AISI 1012 (C 0,10 - 0,15% Mn 0,30 - 0,60) P 0,040% S 0,050% maks/max	9-25
112	SAE/AISI 1015 (C 0,12 - 0,18% Mn 0,30 - 0,60)	9-25
097	SAE/AISI 1017 (C 0,14 - 0,20% Mn 0,30 - 0,60)	9-25
600	SAE/AISI 1023 (C 0,19 - 0,25% Mn 0,30 - 0,60)	9-25
601	WQ1 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%) P 0,020% S 0,028%	18-00
602	WQ2 (Welding Quality C 0,08 - 0,13%, Mn 0,30 - 0,60%) maks/max	18-00
603	WQ3 (Welding Quality C 0,10 - 0,15% Mn 0,40 - 0,60%)	18-00
604	WQ4 (Welding Quality C 0,15 - 0,20% Mn 0,50 - 0,70%) P 0,025% S 0,028%	18-00
605	WQ5 (Welding Quality C 0,20 - 0,25% Mn 0,70 - 0,90%) maks/max	18-00
106	Skopgraafstaal en Hoëkoolstofveerstaal Shovel Steel and High Carbon Spring Steel SS10/83 (Min. 20 ton(s) per item) (C 0,60 - 0,75% Mn 0,60 - 0,75%)	105-75
107	Slytbestande plaat/ Hard-wearing plate - SS10/200 - C 0,40 - 0,55%, Mn 0,70 - 1,00%	98-25
455	BS 970 Part 1 080M40 (slegs analise/analysis only)	104-75
456	BS 970 Part 1 070M55 (slegs analise/analysis only)	109-75
474	SAE 1035	101-25
332	SAE 1060 fynkorrel/fine grain	120-50

GROOTTEBEPERKINGS/SIZE LIMITATIONS

DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm)	
	ROLLE/COILS (b)	LENGTES/LENGTHS (b)
4,5 ≤ 10,0	600 - 1800	600 - 1225
> 10,0 - 12,0	800 - 1800	600 - 1225 (a)

4. KWALITEITSEKSTRAS (VERVOLG)/ QUALITY EXTRAS (CONTINUED)

4.2 KOOLSTOF KWALITEITE VERVOLG 4.2 CARBON QUALITIES CONTINUED

KODE/ CODE		EKSTRA/ EXTRA
105	Ploegskottelstaal - SS10/44 - C 0,75/0,90% Mn 0,60/0,80% (Min. 20 ton(s) per item) Plough Disc Steel Sertifisering/Certification (indien benodig/if required)	111-25
2173	Analise Sertifikaat/Analysis Certificate	0-00
517	SAE1085 Grootebeperkings/Size limitations Dikte/Thickness mm — Wydte/Width 4,5 - 10,00 — 600 - 1800) Slegs rolle/ >10,00 - 12,00 — 800 - 1800) Coils only	115-25

4.3 STRUKTUUR KWALITEITE 4.3 STRUCTURAL QUALITIES

KODE CODE		EKSTRA EXTRA R.c.
512	CME9 Simbool 8/Symbol 8 (4,5 - 6 mm dik/thick) Koper (0,20 - 0,35%) verpligtend/Copper (0,20 - 0,35%) mandatory	38-75
511	CME9 Simbool 8/Symbol 8 (>6 - 12,0mm dik/thick) A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order) B. Bykomende Ekstra/Additional Extra	7-50
3313	Bywoning van meganiese toetse deur S.A.S. (verpligtend)/ Witnessing of mechanical tests by S.A.R. (mandatory)	2-10
387	BS 1449 Grade HR 37/23 Sertifisering/Certification (indien benodig/if required)	9-25
2172	Analise en toetssertifikaat/Analysis and test certificate	0-00
065	BS 1449 Grade HR 43/25 Sertifisering/Certification (indien benodig/if required)	7-50
2172	Analise en toetssertifikaat/Analysis and test certificate	0-00
227	BS4360 Grade 40A Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	6-50
202	BS4360 Grade 43 A/1 Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	6-50
186	B4360 Grade 43 A Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	7-50
288	BS4360 Grade 43 B A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order) B. Bykomende Ekstra/Additional Extra	25-50
3890	Slagtoetse word nie benodig nie/Impact tests not required	0-00
3128	Slagtoetse /Impact tests RT (20Deg. C) Opmerking: Minimum dikte 6 mm/ Note: Minimum thickness 6 mm	4-25
261	BS4360 Grade 43 C A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order) B. Bykomende Ekstra/Additional Extra Slagtoetse verpligtend/Impact tests mandatory (Klant moet temperatuur spesifiseer/Customer to specify temperature) Temperature/Temperatures	36-75
3235	LTO (0° C.) Opmerking: Minimum dikte 6mm/ Note: Minimum thickness 6 mm	5-75

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WARMBAND PLAATDIKTES — HOTSTRIP PLATE THICKNESSES

4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.3 STRUKTUUR KWALITEITE (vervolg) — 4.3 STRUCTURAL QUALITIES (continued)

KODE CODE		EKSTRA EXTRA R.c.
203	BS4360 Grade 50 B A. Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	63-75

4.4 STRUKTUUR KWALITEITE (KOPERHOUDEND) — 4.4 STRUCTURAL QUALITIES (COPPER BEARING)

KODE CODE		EKSTRA EXTRA R.c.
073	BS4360 Grade 40 A (Cu. 0,20 ~ 0,35%) Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	37-50
279	BS4360 Grade 43 A/1 (Cu. 0,20 - 0,35%) Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	37-50
226	BS4360 Grade 43 A (Cu. 0,20 - 0,35%) Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied. (Need not be specified on order)	38-75
077	BS4360 Grade 50 B (Cu. 0,20 - 0,35%) Sertifisering/Certification Analise en toets sertifikaat word voorsien.(Hoef nie op bestelling gespesifiseer te wo Analysis and test certificate will be supplied. (Need not be specified on order)	95-00
027	ASTM A606 Type 2	55-75

4.5 SKEEPSPLAAT KWALITEIT — 4.5 SHIPPLATE QUALITIES

KODE CODE		EKSTRA EXTRA R.c.
126	Lloyds Register of Shipping Grade A	10-25
119	ABS Grade A	10-25
411	ABS Grade B	24-25
	A. Bykomende Ekstras/Additional Extras	
3309/	Bywoning van meganiese toetse deur (a) Lloyds opsiener (verpligtend)	6-70
3314	(b) ABS opsiener (verpligtend)	4-25
3309	Witnessing of mechanical tests by (a) Lloyds surveyor (mandatory)	6-70
3314	(b) ABS surveyor (mandatory)	4-25
	B. Sertifisering/Certification Analise en toets sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied (need not be specified on order)	

CANCELLED

4. KWALITEITSEKSTRAS (VERVOLG)/ QUALITY EXTRAS (CONTINUED)

4.6 TREK EN VOEG KWALITEITE (Vervolg) — 4.6 FORMING AND DRAWING QUALITIES (Continued)

KODE/ CODE		EKSTRA/ EXTRA R.c.
	# B.S. 1449	
054	(a) KHR1	56-00
641	(a) HR2	28-75
642	(a) HR3	27-50
643	HR4	7-50
	A. Sertifisering/Certification (indien benodig/if required)	
2173	Analise sertifikaat/Analysis certificate	
2172	Analise en toetssertifikaat/Analysis and test certificate	
	SUPRAFORM GRADE/SUPRAFORM GRADES	

	GRAAD/ GRADE	MIN WYDTE/ MIN WIDTH (mm)	WYDTE/DIKTE VERHOUDING/ WIDTH/THICKNESS RATIO	DIKTE REEKS/ THICKNESS RANGE (mm)	
585	190	800		4,5 - 12,0	10-50
578	220	800		4,5 - 12,0	29-00
577	250	800		4,5 - 12,0	31-50
582	290	800		4,5 - 12,0	33-75
551	TM 340*	800		4,5 - 10,0	85-00
550	TM 380*	800		4,5 - 10,0	90-75
552	TM 420*	800	320 : 1	4,5 - 10,0	108-50
553	TM 460*	800	320 : 1	4,5 - 10,0	125-75
527	TM 500*	700	280 : 1	4,5 - 10,0	137-50

BEPERKINGS:
1. TM voorvoegsel beteken Termo-Meganies behandelde staal
2. *Bestellings onderhewig aan bevestiging met 20 ton (min.) items.
3. Die maksimum wydte tot dikte verhouding definieer die maksimum wydte wat vir enige gegewe dikte gewals kan word, onderhewig aan bogenoemde beperkings. Groottes buite hierdie reekse op aansoek.

LIMITATIONS:
1. TM prefix indicates Thermo-Mechanical treated steel.
2. *Orders subject to confirmation with 20 tons (min.) items.
3. The maximum width to thickness ratio defines the maximum width that can be rolled for any given thickness subject to the above limitations. Sizes outside these ranges - On application.

4.7 ATMOSFERIESE ROESBESTANDE STAAL — 4.7 WEATHER RESISTANT STEEL

KODE CODE		EKSTRA EXTRA R.c.
124	Cor-Ten Grade A (a) Sertifisering/Certification Analise en toets sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied (need not be specified on order)	173-25
503	Cor-Ten Grade A-F (a) Sertifisering/Certification Analise en toets sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied (need not be specified on order) (Meganiese eienskappe soos vir Cor-Ten Grade A tensy anders ooreengekom)/ (Mechanical properties as for Cor-Ten Grade A unless otherwise agreed)	234-50
594	BS4360 Grade WR 50 A1 (a) Sertifisering/Certification Analise en toets sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied (need not be specified on order)	173-25

(a) Minimum 10 ton/tons per item

4.8 PYP KWALITEITE — 4.8 PIPE SPECIFICATIONS

KODE/ CODE		EKSTRA/ EXTRA R.c.
001	API 5L GRADE A	16-50
002	API 5L GRADE B	16-50
	Sertifisering/Certification Analise en toets sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied (need not be specified on order)	

4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.9 KETEL EN DRUKHOUER KWALITEITE
4.9.1 BS Spesifikasies

4.9 BOILER AND PRESSURE VESSEL QUALITIES
4.9.1 BS Specifications

KODE CODE	GESNYDE LENGTES ALLEENLIK/CUT LENGTHS ONLY	EKSTRA EXTRA R.c.
	BS 1501 GRADE A	
617	BS 1501/151 GRADE 400 A	52-25
618	BS 1501/151 GRADE 430 A	52-25
619	BS 1501/161 GRADE 400 A	115-50
620	BS 1501/161 GRADE 430 A	115-50
621	BS 1501/164 GRADE 400 A **	139-25
622	BS 1501/223 GRADE 460 A **	147-75
623	BS 1501/223 GRADE 490 A **	158-25
624	BS 1501/224 GRADE 430 A **	144-50
625	BS 1501/224 GRADE 460 A **	152-50
626	BS 1501/224 GRADE 490 A **	163-25
	BS 1501 GRADE B	
627	BS 1501/151 GRADE 400 B	57-50
628	BS 1501/151 GRADE 430 B	57-50
629	BS 1501/161 GRADE 400 B	120-75
630	BS 1501/161 GRADE 430 B	120-75
631	BS 1501/164 GRADE 400 B **	144-50
632	BS 1501/223 GRADE 460 B **	153-00
633	BS 1501/223 GRADE 490 B **	163-50
634	BS 1501/224 GRADE 430 B **	149-75
635	BS 1501/224 GRADE 460 B **	157-75
636	BS 1501/224 GRADE 490 B **	168-50
	** ONDERWORPE AAN BEVESTIGING/SUBJECT TO CONFIRMATION	
	A. SERTIFISERING: Analise en toets sertifikaat word voorsien (Hoef nie op bestelling gespesifiseer te word.)	A. CERTIFICATION: Analysis and test certificate will be supplied (need not be specified on order)
	B. KWALITEITSVERSEKERING 1. Standaard Praktyk - Hoef nie op bestelling gespesifiseer te word nie. OPMERKING: Ultrasoniese Toets Standaarde - slegs op aansoek. 1.2 Vakuum Boog Ontgassing: S. 0,01% maks. Van toepassing op alle diktes vir -	B. QUALITY ASSURANCE 1. Standard Practice - Need not be specified on order NOTE: Ultrasonic Test Standards - On application only. 1.2 Vacuum Arc Degassing: S. 0,01% max. Applicable to all thicknesses for -
	BS1501/161) BS1501/164) ALLE GRADE/ALL GRADES BS1501/223) BS1501/224)	
	C. BYKOMENDE EKSTRAS/ADDIT[illegible]XTRAS	
	1. PRODUK EN TOETSSTUKTOES[illegible]UCT AND TEST PIECE CONDITION:	
2288°	Produktoestand "soos [illegible] met toetsstuktoestand "soos gewals" Product condition "as [illegible]ed" with test piece condition "as rolled"	0-00
2711°	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals en gesimuleerd na sweis hittebehandel" (BS 1501)/ Product condition "as rolled" with test piece condition "as rolled and simulated P.W.H.T." (BS 1501) ° Slegs van toepassing op BS 1501/151 en BS 1501/161 in diktes < 40mm/ Only applicable to BS 1501/151 and BS 1501/161 in thicknesses < 40mm	1-25
2282	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd"/ Product condition "normalised" with test piece condition "normalised"	59-00
2709	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd en gesimuleerd na sweis hittebehandeling" (BS 1501)/ Product condition "normalised" with test piece condition "normalised and simulated P.W.H.T." (BS 1501)	60-25
2289*	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd"/ Product condition "as rolled" with test piece condition "normalised"	1-25
2715*	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd en gesimuleerd na sweis hittebehandeling" (BS 1501)/ Product condition "as rolled" with test piece condition "normalised and simulated P.W.H.T." (BS 1501) * Nie van toepassing op BS 1501/223 - alle grade Not applicable to BS 1501/223 - all grades * Klant is verantwoordelik vir normalisering van plate/ Customer is responsible for normalising of plates	2-50

4.9 KETEL EN DRUKHOUER KWALITEITE (Vervolg) 4.9 BOILER AND PRESSURE QUALITIES (Continued)
4.9.1 BS Spesifikasies (Vervolg) 4.9.1 BS Specifications (Continued)

KODE CODE	GESNYDE LENGTES ALLEENLIK/CUT LENGTHS ONLY	EKSTRA/ EXTRA R.c.
	C. BYKOMENDE EKSTRAS/ADDITIONAL EXTRAS (Vervolg/Continued)	
	2. OORLANGSE "V KEEP" SLAGTOETSE/LONGITUDINAL "V NOTCH" IMPACT TESTS (Indien gespesifiseer/If specified)	
	TEMPERATURE/TEMPERATURES:	
3129	RT (20°C)) BS 1501/164; BS 1501/223; BS 1501/224.	11-75
3236	LTO (0°C))	11-75
3242	LT15 (-15°C) - BS 1501/223	15-50
3244	LT20 (-20°C) - BS 1501/164; BS 1501/224	15-50
3246	LT30 (-30°C) - BS 1501/223; BS 1501/224	15-50
3248	LT40 (-40°C)) BS 1501/224	15-50
3250	LT50 (-50°C))	15-50
	OPMERKING: (a) Klant moet temperatuur spesifiseer	
	NOTES: (a) Customer to specify temperature	
	3. WARMTOETSING/HOT TESTING	
	(Slegs van toepassing op Grade B plate/Only applicable to Grade B plates) Indien verifikasie van hoogtemperatuur eienskappe (warmtoetse) deur die klant vereis word, moet dit, sowel as die temperatuur en die toetsfrekwensie op die bestelling gespesifiseer word/ If verification of elevated temperature properties (hot tests) are required by the customer it must be specified on the order as well as the temperature and frequency of testing.	
	TEMPERATURE/TEMPERATURES (Die volgende word voorgestel/The following are suggested)	
3272	Teen/At 150°C	* 7-00
3273	Teen/At 200°C	* 7-00
3975	Teen/At 250°C	* 7-00
2314	Teen/At 300°C	* 7-00
2184	Teen/At 350°C	* 7-00
3274	Teen/At 400°C	* 7-00
	OPMERKING: Warmtoetsing teen ander temperature - slegs op aansoek	
	NOTE: Hot testing to other temperatures - on application only	
	* Hierdie ekstra is van toepassing indien die frekwensie van toetse in ooreenstemming is met die Werke standaard. Dit is "een toetsstuk van elk van die twee dikste plate van elke 25 ton of gedeelte daarvan van dieselfde giet". Enige afwyking van bogenoemde standaard is onderworpe aan navraag en prysbepaling/	
	* This extra applies if the frequency of tests are in accordance with the Works standard. It is "one test piece from each of the two thickest plates in each 25 tons or part thereof from the same cast." Any deviation from the above standard is subject to enquiry and price determination.	

4.9.2 A.S.T.M. KETEL EN DRUKHOUER SPESIFIKASIES 4.9.2 A.S.T.M. BOILER AND PRESSURE VESSEL SPECIFICATIONS

KODE/ CODE	GESNYDE LENGTES ALLEENLIK/CUT LENGTHS ONLY	EKSTRA EXTRA R.c.
025	ASTM A285 GR C	63-50
014	ASTM A515 GR 60	123-50
017	ASTM A515 GR 65	123-50
031	ASTM A515 GR 70 (i)	128-75
346	ASTM A516 GR 60 (i)	146-50
277	ASTM A516 GR 65 (i)	146-50
058	ASTM A516 GR 70 (i)	165-00
	(i) Onderworpe aan bevestiging/Subject to confirmation	
	A. SERTIFISERING: Analise en toets sertifikaat word voorsien (Hoef nie op bestelling gespesifiseer te word.)	A. CERTIFICATION: Analysis and test certificate will be supplied (need not be specified on order)
	B. KWALITEITSVERSEKERING	B. QUALITY ASSURANCE
	1. Standaard Praktyk - Hoef nie op bestelling gespesifiseer te word nie. OPMERKING: Ultrasoniese Toets Standaarde - slegs op aansoek.	1. Standard Practice - Need not be specified on order NOTE: Ultrasonic Test Standards - On application only.
	1.2 Vakuum Boog Ontgassing: S. 0,01% maks. Van toepassing op alle diktes.	1.2 Vacuum Arc Degassing: S. 0,01% max. Applicable to all thicknesses.

WARMBAND PLAATDIKTES
PLAATDIKTES

HOTSTRIP PLATE THICKNESSES
PLATE THICKNESSES

4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.9 KETEL EN DRUKHOUER KWALITEITE (Vervolg)
4.9.2 A.S.T.M. Ketel en drukhouer spesifikasies (Vervolg)

4.9 BOILER AND PRESSURE VESSEL QUALITIES (Continued)
4.9.2 A.S.T.M. Boiler and pressure vessel spesifications (Continued)

KODE/ CODE	GESNYDE LENGTES ALLEENLIK/CUT LENGTHS ONLY	EKSTRA/ EXTRA R.c.
	C. BYKOMENDE EKSTRAS/ADDITIONAL EXTRAS	
	1. PRODUK EN TOETSSTUKTOESTAND/PRODUCT AND TEST PIECE CONDITION:	
2288	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals" Product condition "as rolled" with test piece condition "as rolled"	0-00
2280*	Produktoestand "soos gewals" met toetsstuktoestand "soos gewals en spanningsverlig"/ Product condition "as rolled" with test piece condition "as rolled and stress relieved"	1-25
2282	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd"/ Product condition "normalised" with test piece condition "normalised"	59-00
2287*	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd en spanningsverlig"/ Product condition "normalised" with test piece condition "normalised and stress relieved"	60-25
2286*°	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd en spanningsverlig"/ Product condition "as rolled" with test piece condition "normalised and stress relieved"	2-50
2289°	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd"/ Product condition "as rolled" with test piece condition "normalised".	1-25
	* Spanningsverligting van toetsstukke sal uitgevoer word in ooreenstemming met A.S.T.M. A20, S16. * Stress relieving of test pieces will be carried out in accordance with A.S.T.M. A20, S16. ° Klant is verantwoordelik vir normalisering van plate/ ° Customer is responsible for normalising of plates. Ander bykomende vereistes - slegs op aansoek/ Other supplementary requirements - on application only.	

4.9.3 Ander Spesifikasies

4.9.3 Other Specifications

KODE CODE		EKSTRA/ EXTRA R.c.
457	ASTM A 455 Type 1 (C 0,25% maks./max.) Minimum hoeveelheid per item 40 ton/minimum quantity per item 40 tons Slegs van toepassing op lengtes/Applicable to lengths only	95-50
509	CNE 9 Simbool 6/Symbol 6	52-75
520	CNE 9 Simbool 10/Symbol 10	52-75
	A. Sertifisering/Certification Analise en toetssertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word) Analysis and test certificate will be supplied (need not be specified on order)	
3313	B. Bykomende ekstra/Additional extra: Bywoning van meganiese toetse deur S.A.S. (verpligtend)/ Witnessing of mechanical tests by S.A.R. (mandatory)	2-10

4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.10 KWALITEITE VIR SPESIALE AANWENDING 4.10 SPECIAL PURPOSE QUALITIES

KODE CODE		EKSTRA/ EXTRA R.c.
103	Staal vir versinkingsbaddens (aluminium getem) Gesnyde lengtes alleenlik/Cut lengths only Galvanising bath steel (aluminium killed) A. Sertifisering/Certification (indien benodig/if required)	79-25
2173	Analise sertifikaat/Analysis certificate	0-00
	B. Kwaliteitsversekering/Quality assurance 1. Standaard praktyk/Standard pratice Hoef nie op bestelling gespesifiseer te word/Need not be specified on order 2. Ultrasoniese toetsing - volgens B.S.I. DD 21/1972 Grade C+3 - alle diktes Ultrasonic testing - to B.S.I. DD 21/1972 Grade C+3 - all thicknesses	
050	BS970/ 1955 EN 3A (fynkorrel/fine grain) Gesnyde lengtes alleenlik/Cut lengths only A. SERTIFISERING: / A. CERTIFICATION: Analise en toets sertifikaat word voorsien / Analysis and test certificate will be supplied (need not be specified on order) (Hoef nie op bestelling gespesifiseer te word.) B. KWALITEITSVERSEKERING / B. QUALITY ASSURANCE 1. Standaard Praktyk - Hoef nie op bestelling gespesifiseer te word nie. / 1. Standard Practice - Need not be specified on order 1.1 Ultrasoniese toetsing volgens BSI DD21/1972 GRADE C+3: / 1.1 Ultrasonic testing to BSI DD21/1972 GRADE C+3: Van toepassing op alle bogenoemde spesifikasies/ grade in alle diktes / Applicable to all above specifications/grades in all thicknesses OPMERKING: / NOTE: Ander Ultrasoniese Toets Standaarde - slegs op aansoek. / Other Ultrasonic Test Standards - On application only. 1.2 Vakuum Boog Ontgassing: S. 0,01% maks. / 1.2 Vacuum Arc Degassing: S. 0,01% max. Applicable to all Van toepassing op alle diktes vir -	158-00
	C. Bykomende ekstras/Additional extras Produk en toetsstuktoestand/Product and test piece condition	
2282	Produktoestand "genormaliseerd" met toetsstuktoestand "genormaliseerd" Product condition "normalised" with test piece condition "normalised"	59-00
2289*	Produktoestand "soos gewals" met toetsstuktoestand "genormaliseerd" Product condition "as rolled" with test piece condition "normalised"	1-25
	* Klant is verantwoordelik vir normalisering van plate/ Customer is responsible for normalising of plates	
008	* C.K.S. 149 Grade A	43-25
191	* S.A.E. 950B Wanneer in rolle verskaf, word die min. vloeispanning en min. treksterkte verlaag met 35 MPa. When supplied in coil form, min. yield stress and min. tensile strength are reduced by 35 MPa. * Groottebeperkings/Size Limitations	49-25

DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm) ROLLE/COILS (mm)
4,5 - < 10,0	600 - 1300)
10,0 - 12,0	800 - 1800)

059	S.A.E. 950 X (Maksimum wydte/Maximum width 1225 mm)	78-25
435	BS970 Part 1 150M28 (Fynkorrel slegs analise/fine grain analysis only A. Sertifisering/Certification (indien benodig/if required)	141-25
2173	Analise sertifikaat/Analyses Certificate	0-00
	B. Aanbevole eindgebruik/Recommended end use Staal vir warm wrywing saaglemme/Steel for hot friction saw blades	

CANCELLED

WARMBAND PLAATDIKTES — HOTSTRIP PLATE THICKNESSES

5. WALSRANDROLLE/MILL EDGE COILS

5A.1.1 WARMGEWALSTE ROLLE, WALSRAND (nie skoongebyt)* (Verwys S9 par. 5.4.2)

5A.1.1 HOT ROLLED COILS, MILL EDGE (not ...led) (Refer S9 par. 5.4.2)

AFTREKKING/DEDUCTION
Kode/Code 2150

DIKTE/ THICKNESS (mm)	WYDTE/WIDTH (mm)			
	1025	1225	1525	Alle ander wydtes/ All other widths
4,5 - 12,0	R.c. 18-05	R.c. 19-10	R.c. 19-95	R.c. 14-65

5A.1.2 KWALITEITE — 5A.1.2 QUALITIES

Kode/ Code		EKSTRA/ EXTRA
123	Handelskwaliteit (koolstof 0,25% maks.) Commercial Quality (carbon 0,25% max.)	R.c. 0-00
099	SAE 1010 (C 0,08 - 0,13% Mn 0,30 - 0,60%)	9-25
184	SAE 1012 (C 0,10 - 0,15% Mn 0,30 - 0,60%)	9-25
097	SAE 1017 (C 0,15 - 0,20% Mn 0,30 - 0,60%)	9-25
600	SAE 1023 (C 0,20 - 0,25% Mn 0,30 - 0,60%)	9-25
601	WQ1 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%)	18-00
602	WQ2 (Welding Quality C 0,-,08 - 0,1?% Mn 0,30 - 0,60%)	18-00
603	WQ3 (Welding Quality C 0,10 - 0,15% Mn 0,40 - 0,60%)	18-00
604	WQ4 (Welding Quality C 0,15 - 0,20% Mn 0,50 - 0,70%)	18-00
605	WQ5 (Welding Quality C 0,20 - 0,25% Mn 0,70 - 0,90%)	18-00
216	BS 1449 GR. HR 4	7-50
054	BS1449 Part 1 Grade KHR1	56-00

5A.1.3 VERPAKKING (Rolle - Binnediameter 760 mm)
Standaardverpakking (Kode 60) R0-00
Standaardverpakking op Wiegstukke (Kode 70) R2-35

5A.1.4 WYDTE EN DIKTE EKSTRAS - SOOS PER S.P.E.
Groottebeperkings:
Dikte: 4,5 mm min. Nie-standaarddiktes - Min. hoeveelheid 40 ton/item.
Wydte: 900 mm min.
(Standaardtrappe 25 mm)

5A.1.5 WYDTE TOLERANSIE
Standaard : -0 + 31 mm..... R0-00
Beperkte toleransie: -0 + 20 mm R2-85

5A.1.3 PACKING (Coils - Inside diameter 760 mm)
Standard Packing (Code 60) R0-00
Standard Packing on Cradles (Code 70) R2-35

5A.1.4 WIDTH AND THICKNESS EXTRAS - AS PER S.P.E.
Size limitations:
Thickness: 4,5 mm min. Non-standard thicknesses - min. quantity 40 tons/item.
Width: 900 mm min.
(Standard increments 25 mm)

5A.1.5 WIDTH TOLERANCE
Standard : -0 + 31 mm R0-00
Restricted : -0 + 20 mm R2-85

5. WALSRANDROLLE/MILL EDGE COILS

5A.2.1 WARMGEWALSTE ROLLE, WALSRAND (nie skoongebyt) (Verwys S9 par. 5.4.2)

5A.2.1 HOT ROLLED COILS, MILL EDGE (not pickled) (Refer S9 par. 5.4.2)

AFTREKKING/DEDUCTION
Kode/Code 2150

DIKTE/ THICKNESS (mm)	WYDTE/WIDTH (mm)			
	1025	1225	1525	Alle ander wydtes/ All other widths
4,5 - 12.0	R.c. 13-50	R.c. 14-30	R.c. 15-00	R.c. 11-00

5A.2.2 KWALITEITE

5A.2.2 QUALITIES

Kode/ Code		EKSTRA/ EXTRA
186	* BS4360 Grade 43 A	7-50
261	* BS 4360 Grade 43C	36-75
124	CORTEN A	173-25
503	CORTEN A-F	234-75
	Meganiese eienskappe en grootte beperkings soos per bl. P6 par 4.7/ Mechanical properties and size limitations as per page P6 par. 4.7.	
511	CME9 Simbool/Symbol 8 (> 6 mm dik/thick)	7-50
512	CME9 Simbool/Symbol 8 (≤ 6 mm dik/thick)	38-75
641	BS 1449 Grade HR 2	28-75
642	BS 1449 Grade HR 3	27-50
001	** API 5L GRADE A	16-50
002	** API 5L GRADE B	16-50

NOTA/NOTE

(a) *Geen slagtoetse sal uitgevoer word/No impact tests will be carried out (kode/code 2447)
(b) **Toleransies soos per S.P.E./Tolerances as per S.P.E.

5A.2.3 VERPAKKING (Rolle - Binnediameter 760 mm)
Standaardverpakking (Kode 60) R0-00
Standaardverpakking op Wiegstukke (Kode 70) R2-35

5A.2.3 PACKING (Coils - Inside diameter 760 mm)
Standard Packing (Code 60) R0-00
Standard Packing on Cradles (Code 70) R2-35

5A.2.4 WYDTE EN DIKTE EKSTRAS - SOOS PER S.P.E.
Groottebeperkings:
Dikte: 4,5 mm min. Nie-standaarddiktes - Min. hoeveelheid 40 ton/item.
Wydte: 900 mm min.
(Standaardtrappe 25 mm)

5A.2.4 WIDTH AND THICKNESS EXTRAS - AS PER S.P.E.
Size limitations:
Thickness: 4,5 mm min. Non-standard thicknesses - min. quantity 40 tons/item.
Width: 900 mm min.
(Standard increments 25 mm)

5A.2.5 WYDTE TOLERANSIE
Standaard : -0 + 31 mm..... R0-00
Beperkte toleransie: -0 + 20 mm R2-85

5A.2.5 WIDTH TOLERANCE
Standard : -0 + 31 mm R0-00
Restricted : -0 + 20 mm R2-85

DECLASSIFIED

WARMGEWALSTE PLAATDIKTES HOTRAND PLATE THICKNESSES

5. WALSRANDROLLE/MILL EDGE COILS

5B.1.1 WARMGEWALSTE ROLLE, WALSRAND (skoongebyt)* (Verwys S9 par. 5.4.2)

5B.1.1 HOT ROLLED COILS, MILL EDGE (pickled)* (Refer S9 par. 5.4.2)

AFTREKKING/DEDUCTION
Kode/Code 3039 & 2053

DIKTE/ THICKNESS (mm)	WYDTE/WIDTH (mm)			
	1025	1225	1525	Alle ander wydtes/ All other widths
4,5 – [illegible]	R.c. 10-75	R.c. 11-90	R.c. 13-10	R.c. 7-40

* Skoonbyt ekstras soos per bladsy P14 par.9 /Pickling extras as per page P14 par.9

5B.1.2 KWALITEITE 5B.1.2 QUALITIES

Kode/ Code		EKSTRA/ EXTRA
123	Handelskwaliteit (koolstof 0,25% maks.) Commercial Quality (carbon 0,25% max.)	R.c. 0-00
099	SAE 1010 (C 0,08 - 0,13% Mn 0,30 - 0,60%)	9-25
184	SAE 1012 (C 0,10 - 0,15% Mn 0,30 - 0,60%)	9-25
097	SAE 1017 (C 0,15 - 0,20% Mn 0,30 - 0,60%)	9-25
600	SAE 1023 (C 0,20 - 0,25% Mn 0,30 - 0,60%)	9-25
601	WQ1 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%)	18-00
602	WQ2 (Welding Quality C0-,08 - 0,13% Mn 0,30 - 0,60%)	18-00
603	WQ3 (Welding Quality C 0,10 - 0,15% Mn 0,40 - 0,60%)	18-00
604	WQ4 (Welding Quality C 0,15 - 0,20% Mn 0,50 - 0,70%)	18-00
605	WQ5 (Welding Quality C 0,20 - 0,25% Mn 0,70 - 0,90%)	18-00
643	BS 1449 GR. HR 4	7-50
054	BS1449 Part 1 Grade KHR1	56-00
186	* BS4360 Grade 43 A	7-50
261	* BS 4360 Grade 43C	36-75
124	CORTEN A	173-25
503	CORTEN A-F	234-50
	Meganiese eienskappe en grootte beperkings soos per bl. P6 par 7.4/ Mechanical properties and size limitations as per page P6 par. 7.4.	
511	CME9 Simbool/Symbol 8 (> 6 mm dik/thick)	7-50
512	CME9 Simbool/Symbol 8 (⩽ 6 mm dik/thick)	38-75
641	BS 1449 Grade HR 2	28-75
642	BS 1449 Grade HR 3	27-50
001	** API 5L GRADE A	16-50
002	** API 5L GRADE B	16-50

NOTA/NOTE

(a) *Geen slagtoetse sal uitgevoer word/No impact tests will be carried out (kode/code 2447)

(b) **Toleransies soos per S.P.E./Tolerances as per S.P.E.

5B.1.3 VERPAKKING (Rolle - Binnediameter 610 mm)
Standaardverpakking (Kode 60) R0-00
Standaardverpakking op Wiegstukke (Kode 70) R2-35

5B.1.3 PACKING (Coils - Inside diameter 610 mm)
Standard Packing (Code 60) R0-00
Standard Packing on Cradles (Code 70) R2-35

5B.1.4 WYDTE EN DIKTE EKSTRAS - SOOS PER S.P.E.
Groottebeperkings:
Dikte: 4,5 mm min. Nie-standaarddiktes - Min. hoeveelheid 40 ton/item.
Wydte: 900 mm min.
(Standaardtrappe 25 mm)

5B.1.4 WIDTH AND THICKNESS EXTRAS - AS PER S.P.E.
Size limitations:
Thickness: 4,5 mm min. Non-standard thicknesses - min. quantity 40 tons/item.
Width: 900 mm min.
(Standard increments 25 mm)

5B.1.5 WYDTE TOLERANSIE
Standaard : -0 + 31 mm..... R0-00
Beperkte toleransie: -0 + 20 mm R2-85

5B.1.5 WIDTH TOLERANCE
Standard : -0 + 31 mm R0-00
Restricted : -0 + 20 mm R2-85

6. SPESIALE VERWERKINGSEKSTRAS/METALLURGIESE VEREISTES/ SPECIAL PROCESSING EXTRAS/METALLURGICAL REQUIREMENTS

KODE/ CODE	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER	APPLICABLE ONLY IF SPECIFIED ON ORDER	EKSTRA/ EXTRA
	6.1 Verwerkingsekstras	6.1 Processing extras	
	6.1.1 Toleransie-ekstra vir beperkte dikte - Terugsny na dikte (rolle) is verpligtend. Vir kleiner dikte-toleransies, maar minstens - 75% van	6.1.1 Restricted thickness tolerance extra - Cut back to thickness (coils) is compulsory. For closer thickness tolerances, but not more restrictive than	
2056	normale toleransie	75% of normal tolerance	12-50
2063	6.1.2 Rolle wat tot bestelde dikte teruggesny word	6.1.2 Coils cut back to ordered thickness	7-55
2015	6.1.3 Weeg van afsonderlike bondels/rolle en die aanbring van aangetekende massa op elke bondel/rol	6.1.3 Weighing of individual bundles/ coils and marking the recorded mass on each coil/bondle.....	2-05
2053	6.1.4 Smalband, rolle en lengtes - skoongebyt	6.1.4 Slit strip, coils and lengths - pickled	
2054	(a) Skoongebyte materiaal word gewoonlik, geolie met standaard walsolie voorsien.	(a) Pickled material is normally supplied oiled with standard mill oil	
	(b) Vir lae koolstof staal d.i. koolstof op tot en insluitende 0,25 persent alleenlik.	(b) For low carbon steels i.e. carbon up to and including 0,25 percent only.	
	(c) Die volgende wydte en dikte ekstras sal van toepassing wees:	(c) The following width and thickness extras will apply:	

DIKTE THICKNESS (mm)	SMALBAND SLIT STRIP	ROLLE & GESNYDE LENGTES / COILS & CUT LENGTHS WYDTE/WIDTH (mm)
	<600 mm SOOS/AS PER S.P.E.	775 - 1 800
4,5 - 4,8 (Maks./Max.)	R36-65	R36-65

2771	6.1.5 Beperkte Platheidstoleransie Vir platheidstoleransie van 50% minder as normale toleransie (verwys bladsy S3 par. 3.3)	6.1.5 Restricted Flatness Tolerance For flatness tolerance of 50% less than normal tolerance (refer page S3 par. 3.3)	11-95
2085	6.1.6 Normalisering (Indien spesifikasie nie daarvoor voorsiening maak nie)	6.1.6 Normalising (If not provided for by specification)	59-00
	Groottebeperking/Size Limitation		
	Dikte/Thickness: Min. 6,0 mm		
	Lengte/Length: 2,0 - 13,8 m (verw. bl. P par. 3.4/Refer p. P2 par. 3.4)		
2055	6.1.7 Hersny	6.1.7 Reshearing	
	Nominale massa per plaat	Nominal mass per plate	
	≤50 kg	≤50 kg	36-25
	>50 - 100 kg	>50 - 100 kg	20-50
	>100 - 220 kg	>100 - 220 kg	11-85
	Hersny (plate)	Reshearing (plates)	
	Groottebeperkings/Size Limitations		
	Dikte/Thickness 6 mm maks/max		
	Wydte/Width 1500 mm maks/max		
	Lengte/Length 3,65 m maks/max		
	Vlamgesnyde plate is slegs volgens standaard./ Flame-cut plates are to standard.		

UNCONTROLLED

KODE/ CODE	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER/ APPLICABLE ONLY IF SPECIFIED ON ORDER		EKSTRA EXTRA
			R.c.
	6.2 METALLURGIESE EKSTRAS VERVOLG/METALLURGICAL EXTRAS CONTINUED		
	6.2.1 Slagtoetse -	6.2.1 Impact tests -	
	(a) Slagtoetse vir inligting alleen: (Oorlangs) Charpy-toetse uitgevoer teen 'n spesifieke temperatuur vir inligting alleen met geen minimum gespesifiseerde energiewaarde. Gebaseer op een stel van drie toetse van die dikste plaat van 'n spesifieke massa of gedeelte daarvan van een giet.	(a) Impact Tests for information only: (Longitudinal) Charpy impact tests conducted at a specified temperature for information only with no minimum energy value specified. Based on one set of three tests from the thickest plate of a specified tonnage or part thereof from one cast	2-25
	Temperature/Temperatures:		
3251	RT (20 Deg. C)		
3252	LT0 (0 Deg. C)		
3253	LT5 (-5 Deg. C)		
3254	LT10 (-10 Deg. C)		
3255	LT15 (-15 Deg. C)		
3256	LT20 (-20 Deg. C)		
3257	LT30 (-30 Deg. C)		
3258	LT40 (-40 Deg. C)		
3259	LT50 (-50 Deg. C)		
	(b) Vir toetsing van gespesifiseerde aantal tonne per giet, byv. BS 4360 Grade A,B,C en D Een stel van 3 toetse (oorlangs)	(b) For testing specified number of tons per cast, e.g. BS 4360 Grades A,B,C or D (Longitudinal) One set of 3 tests (longitudinal)	
	Temperature/Temperatures:		
3128	RT (20 Deg. C)		4-25
	(ii) Een stel van drie toetse vir temperature laer dan R.T.	(ii) 1 set of 3 tests for temperatures lower than R.T.	5-75
	Temperature/Temperatures:		
3235	LT0 (0 Deg.C)		5-75
3237	LT5 (-5 Deg. C)		5-75
3239	LT10 (-10 Deg. C)		5-75
3241	LT15 (-15 Deg. C)		5-75
3243	LT20 (-20 Deg. C)		5-75
3245	LT30 (-30 Deg. C)		5-75
3247	LT40 (-40 Deg. C)		5-75
3249	LT50 (-50 Deg. C)		5-75
	(c) Vir toetsing van elke gewalste plaat (Produk van 'n platblok) byv. BS 1501 Part 1 of BS4360 Graad E	(c) For testing each rolled plate (Product of a slab) e.g. BS 1501 Part 1 or BS 4360 Grade E	
	(i) Een stel van drie toetse oorlangs	(i) 1 set of 3 tests longitudinal	
	Temperature/Temperatures		
3129	RT (20 Deg. C)		11-75
3236	LT0 (0 Deg. C)		11-75
3238	LT5 (-5 deg. C)		11-75
3240	LT10 (-10 deg.C)		15-50
3242	LT15 (-15 deg.C)		15-50
3244	LT20 (-20 deg.C)		15-50
3246	LT30 (-30 deg.C)		15-50
3248	LT40 (-40 deg.C)		15-50
3250	LT50 (-50 deg.C)		15-50
	OPMERKING: Slagtoetse - Dwars sal op aansoek voorsien word.	NOTE: Impact Tests - Transverse will be supplied on application.	

6. SPESIALE VERWERKINGS/METALLURGIESE VEREISTES (VERVOLG)
SPECIAL PROCESSING/METALLURGICAL REQUIREMENTS (CONTINUED)

KODE/ CODE	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER/ APPLICABLE ONLY IF SPECIFIED ON ORDER	EKSTRA EXTRA
	6.2 METALLURGIESE EKSTRAS VERVOLG/METALLURGICAL EXTRAS CONTINUED	R.c.
	6.2.2 Toetsing van Plate — 6.2.2 Testing of Plates	
	(i) Warmtoetsing van plate: — (i) Hot testing of plates:	
	Temperature/Temperatures:	
3271	Teen/at 100 deg. C	7-00
3272	Teen/at 150 deg. C	7-00
3273	Teen/at 200 deg. C	7-00
3975	Teen/at 250 deg. C	7-00
2314	Teen/at 300 deg. C	7-00
2184	Teen/at 350 deg. C	7-00
3274	Teen/at 400 deg. C	7-00
2036	Teen/at 450 deg. C	7-00

6.3 UITREIKING VAN TOETS- EN/OF GIETANALISESERTIFIKATE
Van toepassing op Handelskwaliteit Grofplaat en Platblokke C 0,33% maksimum

6.3 SUPPLY OF TEST AND/OR CAST ANALYSIS CERTIFICATES
Applicable to Commercial Quality Plates and Slabs C 0,33% Max.

PER ITEM TON(S)	GIETANALISE-SERTIFIKATE (GIETPOTANALISE/ CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2003)	TOETS- EN GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ TEST AND CAST ANALYSIS CERTIFICATE (LADLE ANALYSIS) (2005)
	R.c.	R.c.
0 - 10	4-20	8-25
>10 - 20	3-50	7-30
>20 - 30	1-90	4-20
>30 - 40	1-50	2-85
> 40	0-95	1-70

6.4 EKSTRAS VIR BYWONING VAN TOETSE EN INSPEKSIE DEUR BUITE INSTANSIES

6.4 EXTRA FOR WITNESSING OF TESTS AND INSPECTION BY OUTSIDE AUTHORITIES

KODE/ CODE				EKSTRA/ EXTRA R.c.
	6.4.1	Bywoning van Meganiese Toetse (Uitsluitende Ultrasoniese Toetsing)	6.4.1 Witnessing of mechanical tests (Excluding Ultrasonic Testing)	
	(a)	Deur Lloyds opsiener vir -	(a) By Lloyds surveyor for -	
3309	(i)	Skeepsplaat A/B/Struktuurplaat	(i) Ship Plate A/B/Structural Plate	6-70
3310	(ii)	Skeepsplaat C/D/E/Ketelplaat	(ii) Ship plates C/D/E/Boiler Plate	7-95
3311	(b)	Deur Germanischer Lloyd opsiener vir Skeepsplaat	(b) By Germanischer Lloyd surveyor for Ship Plates	8-45
3312	(c)	Deur klant	(c) By customer	4-25
	(d)	of sy verteenwoordiger anders dan in (a) of (b) genoem, soos:	(d) or his representative other than (a) or (b) above such as:	
3313	S.A. Spoorweë/S.A. Railways			2-10
3314	A.B.S.			4-25
3315	General Superintendence			4-25
3316	British Engine and Insurance			4-25
3317	T.U.V.			4-25
	(e)	Vir elke verteenwoordiger bykomend tot (a), (b) of (c) bo genoem	(e) For each representative additional to (a), (b) or (c) above	16-90
	6.4.2	Bywoning van ultrasoniese toetse	6.4.2 Witnessing of ultrasonic tests	
3320	(a)	Deur klant	(a) By customer	8-45
	(b)	of sy verteenwoordiger soos:	(b) or his representative such as:	
3318	Lloyds			8-45
3319	Germanischer Lloyd			8-45
3321	S.A. Spoorweë/S.A. Railways			8-45
3322	A.B.S.			8-45
3323	General Superintendence			8-45
3324	British Engine and Insurance			8-45
3325	T.U.V.			8-45
	(c)	Vir elke bykomende verteenwoordigers	(c) For each additional representative	16-90
2596	6.4.3	Toetse- bywoning van toetse en uitmerk van toetstuk monsters deur TUV.	6.4.3 Tests- Witnessing of tests and marking out of test piece samples by TUV.	10-15

6. SPESIALE VERWERKINGS/METALLURGIESE VEREISTES (VERVOLG)
SPECIAL PROCESSING/METALLURGICAL REQUIREMENTS (CONTINUED)

KODE/ CODE	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER/ APPLICABLE ONLY IF SPECIFIED ON ORDER				EKSTRA/ EXTRA
					R.c.
	6.4	EKSTRAS VIR BYWONING VAN TOETSE EN INSPEKSIE DEUR BUITE INSTANSIES (VERVOLG)	6.4	EXTRAS FOR WITNESSING OF TESTS AND INSPECTION BY OUTSIDE AUTHORITIES (CONTINUED)	
	6.4.4	Oppervlak Inspeksie	6.4.4	Surface Inspection	
3328	(a)	Deur klant	(a)	By customer	8-45
	(b)	of sy verteenwoordiger soos:	(b)	or his representative such as:	
3326		Lloyds			8-45
3327		Germanischer Lloyd			8-45
3329		S.A. Spoorweë/S.A. Railways			4-20
3330		A.B.S.			8-45
3331		General Superintendence			8-45
3332		British Engine and Insurance			8-45
3333		T.U.V.			8-45
	(c)	Vir elke bykomende verteenwoordiger	(c)	For each additional representative	16-90
	6.4.5	Bywoning van ultrasoniese toetse en oppervlak inspeksie	6.4.5	Witnessing of ultrasonic tests and surface inspection	
3336	(a)	Deur klant	(a)	By customer	8-45
	(b)	of sy verteenwoordiger soos:	(b)	or his representative such as:	
3334		Lloyds			8-45
3335		Germanischer Lloyd			8-45
3337		S.A. Spoorweë/S.A. Railways			8-45
3338		A.B.S.			8-45
3339		General Superintendence			8-45
3340		British Engine and Insurance			8-45
3341		T.U.V.			8-45
	(c)	Vir elke bykomende verteenwoordiger	(c)	For each additional representative	16-90

7. BEPERKING OP OOR- OF ONDERMAAT TOELATING (Verwys bladsy S7 par.5)

7. LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE (Refer page S7 par.5)

2408	(i)	50% beperking van standaard oor- of ondermaat toelating (2408)	(i)	50% limitation of standard overage or underage allowance (2408)	R.c. 8-60
2409	(ii)	Wanneer 2½% oor- of ondermaat van item massa gespesifiseer word (2409)..... (Slegs van toepassing op items onder 100 ton)	(ii)	When 2½% overage or underage of item mass is specified (2409) ..... Applicable only to items under 100 tons)	13-55
2440	(iii)	(a) Vir gespesifiseerde minimum hoeveelhede	(iii)	(a) For specified minimum quantities	3-50
2293		(b) Vir gespesifiseerde maksimum hoeveelhede (Uitsluitende ekstras vir beperkings op oor- of ondermaat)		(b) For specified maximum quantities (Excluding extras for restrictions on overage or underage)	3-50

8. WARMBAND - PLAATDIKTES - GROFPLAAT - NIE KANTGESNY/ (3093)
HOT STRIP PLATE THICKNESSES - NOT SIDE TRIMMED

Aftrekking ..... R4-40 per ton
Dikte/Thickness (mm)
4,5 - 12
Wydtetoleransies
"Niks onder"
Plus toleransies oor gespesifiseerde wydte (mm)

Deduction ..... R4-40 per ton.
Wydte/Width (mm)
900 - 1800
Width Tolerances
"Nothing under"
Plus tolerances over specified width (mm)

LENGTE/LENGTH (m)	WYDTE/WIDTH (mm)	DIKTE/THICKNESS (mm)	
		4,5 - 10	>10 - 12
<3	900 - <1500	16	17
	1500 - 1800	17	19
3 - 6	900 - <1500	16	19
	1500 - 1800	19	19

Min. Hoeveelheid 20 ton per item
Wydte, dikte en lengte ekstras soos per SPE 118 bladsy P2 - P3 van toepassing.

Min. quantity 20 tons per item.
Width, thickness and length extras as per SPE118 P2 - P3 applicable.

WARMBAND PLAATDIKTES — HOTSTRIP PLATE THICKNESSES

COILS/SLIT STRIP/LENGTHS

9. VERPAKKINGSEKSTRAS — PACKING EXTRAS

9.1 WARMGEWALSTE GROFPLAAT/SMALBAND

Rolle is beskikbaar tot 'n maksimum massa (uitgedruk in kg/mm. van wydte) soos uiteengesit in die onderstaande tabel (klante moet vanaf die mees aanvaarbare rolgrootte vir hul behoeftes kies en dit op die bestelling spesifiseer).

9.1 HOT ROLLED PLATES/SLITSTRIP

Coils are available to maximum mass (expressed in kg/mm of width) as set out in the undermentioned table. (Customers should select from the table and specify on the order the coil size most suited to their requirements).

9.1.1 WARMGEWALSTE GROFPLAAT/SMALBAND — 9.1.1 HOT ROLLED PLATES/SLITSTRIP

ROLLE 75 –<600 mm WYD/WIDTH						
MAKS. kg/mm WYDTE/ MAX. kg/mm WIDTH	KODE CODE	MINIMUM WYDTE/ MINIMUM WIDTH (mm)	STANDAARD VERPAKKING STANDARD PACKING NO PROTECTION		VOLBEDEKKING MET ROESWERENDE SKROTPLAAT/FULL COVERAGE WITH RUST PREVENTATIVE WATERPROOF PAPER AND WASTER SHEET	
			SONDER WIEGDRAER/WITHOUT CRADLE (KODE/CODE 08)	MET WIEGDRAER/WITH CRADLE (KODE/CODE 09)	SONDER WIEGDRAER/WITHOUT CRADLE KODE/CODE 28)	MET WIEGDRAER/WITH CRADLE. (KODE/CODE 29)
10,00	20	150	1-40	2-70	2-65	3-85
5,00	21	75	4-85	7-30	7-25	9-70
3,33	22	40	8-25	11-90	11-85	15-50
2,50	23	25	18-50	25-80	25-85	33-00

9.1.2 OPMERKINGS

i) Rolle op wiegdraers word normaalweg slegs vir spoorvervoer aangebied en deurgaans met die oog in die breedte van 'n trok gelaai.

ii) Rolle sonder wiegdraers word slegs vir padvervoer aangebied en met die oog in die lengte rigting op 'n vragmotor gelaai.

iii) Indien wiegdraers vir padvervoer aangevra word moet klant spesifiseer in watter rigting die oog van die rol gelaai moet word.

iv) Die massa van die wiegdraers is nie by die gefaktureerde massa ingesluit nie.

v) Rolmassa gespesifiseerd "Slegs Blokgiet" of "Slegs Stringgiet" is onderworpe aan onderhandeling.

vi) Rolle word saamgebind in bondelgroottes om die werke praktyk te pas. Gespesifiseerde maksimum bondelmassa is onderhewig aan onderhandeling.

a) Vir gespesifiseerde 10kg/mm wydte, bondels van stroke, 150-600 mm wyd sal nie 10,89 ton oorskry.

b) Om die maksimum bondelmassa van stroke 75 mm –<600 mm wyd te bereken sal die volgende formule geld - "Gespesifiseerde kg/mm wydte x 1200".

9.1.2 NOTES

i) Coils on cradles are normally for rail transport only, and coils are loaded with the eye of the coil transversely positioned onto the truck.

ii) Coils without cradles are only for road transport and coils are loaded with the eye of the coil lengthwise positioned onto vehicle.

iii) If cradles for road transport are specified then customer must specify direction of eye of coil.

iv) The mass of cradles is not included in the invoiced mass.

v) Coil mass specified "Ingot Cast Only" or "Continuous Cost Only" is subject to negotiation.

vi) Coils are strapped together to form bundles in sizes to suit works practice. Specified maximum bundle mass is subject to negotiation.

a) for specified 10 kg/mm of width bundles of strip 150-600 mm wide will not exceed 10,89 tons

b) To calculate maximum bundle mass for strip 75 mm –<600 mm wide the following formula applies - "Specified kg/mm width x 1200".

UNCONTROLLED

HARDBAND PLAATDIKTES

VERPAKKINGSEKSTRAS (VERVOLG)

HOTROLLED PLATE THICKNESSES

PACKING EXTRAS (CONTINUED)

9.2 HARDGEWALSTE GROEPLAAT IN SOLLE

Solle is beskikbaar tot 'n maksimum massa (uitgedruk in tonne) soos uiteengesit in die volgende tabel (kliënte moet uit die tabel selekteer en op die bestelling die rolmassa spesifiseer wat die beste aan sy behoeftes voldoen).

9.2 HOT ROLLED PLATES IN COILS

Coils are available to a maximum mass (expressed in tons) as set in the following table (Customers should select from the table and specify on the order the coil size most suited to their requirements).

9.2.1 EK .MAS = ROLMASSA

Rolle met of sonder wiegdrasers.

9.2.1 EXTRAS = COIL MASS

Coils with or without cradles.

MAKSIMUM MASSA VAN ROL/ MAXIMUM COIL MASS (TON(S)	WYDTE BEREIK/ WIDTH RANGE (mm)	KODE/ CODE	TIPE VERPAKKING/TYPE OF PACKING			
			STANDAARD VERPAKKING SONDER BESKERMING/ STANDARD PACKING WITHOUT PROTECTION ROLLE/COILS		VOLLEDIGE BESKERMING MET ROESVERHINDERENDE WATER-DIGTE PAPIER EN SWEETSHEETS/ FULL PROTECTION WITH RUST PREVENTATIVE WATERPROOF PAPER AND WASTER SHEETS	
			SONDER WIEG-DRAER/WITH-OUT CRADLE KODE/CODE 08	MET WIEG-DRAER/WITH CRADLE KODE/CODE 09	SONDER WIEG-DRAER/WITH-OUT CRADLE KODE/CODE 28	MET WIEG-DRAER/WITH CRADLE KODE/CODE 29
26	1300 - 1800	A0	0-00	1-20	1-20	3-45
22	1100 - 1680	A1	0-00	1-20	1-20	3-45
	800 - 1145					
19	1300 - 1800	A2	0-00	1-20	1-20	3-45
	800 - 1395					
18	1800 - 1800	A3	0-00	1-20	1-20	3-45
	800 - 1185					
14	1800 - 1800	A4	0-00	1-20	1-20	3-45
12	900 - 1800	A5	0-00	1-20	1-20	3-45
10	800 - 1800	A6	0-00	1-60	1-55	3-75
	800 - 1585					
8	1760 - 1800	A7	1-00	2-90	3-75	5-60
7	770 - 1800	A8	1-40	3-55	4-45	6-30
6	800 - 1800	A9	2-00	4-35	4-95	6-80
5	770 - 1195	50	2-75	5-85	5-60	8-60
4	800 - 990	51	3-95	7-55	7-55	11-25

9.2.2 OPMERKINGS

i) Rolle op wiegdrasers word normaalweg slegs vir spoorvervoer aangebied en deurgaans met die oog in die rigrigting van 'n trok gelaai.

ii) Rolle sonder wiegdrasers word slegs vir padvervoer aangebied en met die oog in die lengte rigting op 'n vragmotor gelaai.

iii) Indien wiegdrasers vir padvervoer aangevra word moet kliënt spesifiseer in watter rigting die oog van die rol gelaai moet word.

iv) Die massa van die wiegdrasers is nie by die geraktureerde massa ingesluit nie.

v) Rolmassa:= Die rolmassa hierin vermeld is onderworpe aan verandering.

vi) Rolmassa gespesifiseerd: "Slegs Vlakgiet" of "Slegs Stringgiet" is onderworpe aan onderhandeling.

9.2.2 NOTES

i) Coils on cradles are normally for rail transport only and coils are loaded with the eye of the coil transversely positioned onto the truck.

ii) Coils without cradles are only for road transport and coils are loaded with the eye of the coil lengthwise onto the motortruck.

iii) If cradles for road transport are specified then customer must ensure that the direction of the eye of the coil is specified.

iv) The mass of cradles is not included in the invoiced mass.

v) Coil Mass:= The coil mass indicated above is subject to alteration.

vi) Coil mass specified "Ingot Cast only" or "Continuous Cast Only" is subject to negotiation.

9.3 AFLEWERING = TARPAULINS

Die Korporasie dek nie Pad/Spoorvragtrokke gedurende die vervoer van nie skoongeblyte Warm gevalsde materiaal nie. Indien kliënte dit noodsaaklik ag dat hul materiaal in trokke met trokseile bedek vervoer word, moet die bestelling gemerk word met standaard opmerking nr. 2067 = aflewering (trokke moet met trokseile bedek word.)

Ekstra .....(2067)..... R1-25 per ton

OPMERKING: Bovermelde het nie betrekking op geblyte materiaal nie.

9.3 DELIVERY = TARPAULINS

The Corporation does not cover Road/Railway trucks during the transportation of unpickled Hot Rolled material. If customers consider it imperative that their material be dispatched in trucks covered with tarpaulins, the order must be endorsed with standard remark Nr. 2067 = delivery (trucks to be covered with Tarpaulins)

Extra .....(2067)..... R1-25 per ton

NOTE: The above is not applicable to Pickled material.

WARMBAND PLAATDIKTES

B. STANDAARDVERVAARDIGINGSPRAKTYK

HOTSTRIP PLATE THICKNESSES

STANDARD MANUFACTURING PRACTICE

1. OMVANG

Warmgewalste grofplaat is daardie groep platprodukte 4,5 - 12 mm dik in wydtes tot en met 1800 mm tensy andersins gespesifiseer kan warmgewalste grofplaat in rolle, lengtes of smalband in rolle voorsien word.

2. KWALITEIT

2.1 HANDELSKWALITEIT

Wanneer Handelskwaliteit gespesifiseer word, is die volgende anlise en toetse van toepassing:

2.1.1 CHEMIESE ANALISE
(Gietpotanalise)

(a) Analise: C 0,25% maks., P 0,04% en S 0,05% maks.

(b) Handelskwaliteit Warmgewalste Grofplaat 4,5 mm dik en dikker word normaalweg gelewer in staal met 'n koolstofinhoud van 0,25% maks.

(c) Wanneer verlang is Handelskwaliteit beskikbaar, in 5-puntkoolstofreekse reekse tot 0,25% maks. waarvoor ekstras gevra word.
(Verwys par. 4.1, bladsy P4.)
OPMERKING:
Handelskwaliteit word nie vervaardig om aan treksterkte vereistes te voldoen nie.

1. SCOPE

Hot Rolled plate comprise that group of flat products 4,5 - 12 mm thick in widths up to 1800 mm wide. Unless otherwise specified Hot Rolled plate can be supplied in coils, cut lengths and slit strip coils.

2. QUALITY

2.1 COMMERCIAL QUALITY

When Commercial Quality is specified, the following and analysis and tests, are applicable:-

2.1.1 CHEMICAL ANALYSIS
(Ladle Analysis)

(a) Analyses: C 0,25% max., P 0,04% and S 0,05% max.

(b) Commercial Quality Hot Rolled Plates 4,5 mm thick and thicker are normally supplied in steel with a carbon content of 0,25% max.

(c) When required, Commercial Quality is available in 5-point carbon ranges up to 0,25% max. for which extras are charged.
(Refer par. 4.1 page P.4.)
NOTE:
Commercial Quality is not produced to conform to tensile requirements.

YSKOR BEPERK ISCOR LIMITED

HOTSTRIP PLATE THICKNESSES

2. KWALITEIT (VERVOLG)
QUALITY (CONTINUED)

2.1.2 BUIGTOETSE

Vir enige koolstofreeks wat nie die maksimum van 0,25% oorskry nie, behoort die toetsmonsters by kamertemperatuur deur 'n boog van 180 grade in enige rigting om 'n dikte gelykstaande aan drie maal die van die toetsmonster, gebuig te kan word.

OPMERKINGS:

(a) Toetsstukke is minstens 38 mm wyd. Die rukant of snyrand deur die snyproses veroorsaak, kan verwyder word deur middel van vyl, slyp of masjienering.

(b) Daar behoort geen geredelike sigbare krake op enige gebuigde oppervlak te wees nie. Krake op die gesnyde kante van die monster en growwe tekstuur word egter buite rekening gelaat.

2.1.2 BEND TESTS

For any carbon range, the maximum of which does not exceed 0,25%, a test specimen should stand being bent at room temperature through 180 degrees in any direction around a thickness equal to three times that of the specimen.

NOTES:

(a) Test pieces are not less than 38 mm wide. The rough edge or arris caused by cutting or shearing may be removed by filing, grinding or machining.

(b) There should be no readily visible cracks along any bend, but cracks at the sheared edges of the specimen and coarse grain are disregarded.

3. GROOTTEREEKS

3. RANGE OF SIZES

FYNPLAAT/SHEETS			SMALBAND/SLIT STRIP	
STANDAARD DIKTES (mm) STANDARD THICKNESS (mm)	WYDTES/WIDTHS (mm)		LAE-KOOLSTOFSTAAL d.i. KOOLSTOF OP TOT EN INSLUITENDE 0,25%/ LOW CARBON STEELS i.e. CARBON UP TO AND INCLUDING 0,25%	HOË-KOOLSTOFSTAAL d.i. KOOLSTOF OOR 0,25% EN HOË TREKSTERKTESTAAL bv. CORTEN/ HIGH CARBON STEELS i.e. CARBON OVER 0,25% AND HIGH TENSILE STEEL e.g. CORTEN
	ROLLE/ COILS	GESNYDE LENGTES/ CUT LENGTHS	WYDTES/ WIDTHS	WYDTES/ WIDTHS
12,0	800 - 1 800	800 - 1800	Nie beskikbaar Not available	Nie beskikbaar Not available
10,0 8,0			225 - < 600	Op aanvraag On application
6,0 5,0	600 - 1 800	600 - 1800	150 - < 600 100 - < 600	300 - < 600
4,5			75 - < 600	150 - < 600

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WARMBAND PLAATDIKTES

3.2 BINNEDIAMETER VAN ROLLE

(a) Gekontsnyde rolle en smalband in rolle (nie skoongebyt)

KODE/ CODE	GESPESIFISEERDE DIKTE (MM)/ SPECIFIED THICKNESS (MM)	DIAMETER BINNE/ DIAMETER INSIDE (MM)	
		GESPESIFISEERDE WYDTES/ SPECIFIED WIDTHS (MM)	
		≤ 1225	> 1225
2591	≤ 8	*610 of/or 760	*610 of/or 760
2591	> 8	760	760

* Volgens Werkekeuse

(b) Rolle (Skoongebyt)

KODE/CODE	DIA BINNE/DIA INSIDE (MM)
2591	610

(c) Walsrand rolle

KODE/CODE	DIA BINNE/DIA INSIDE (MM)
2591	760

HOTSTRIP PLATE THICKNESSES

3.2 INSIDE DIAMETER OF COILS

(a) Side trimmed coils and slit strip in coils (not pickled)

* At Works option

(b) Coils (Pickled)

(c) Mill Edge Coils

4. TOLERANSIES / TOLERANCES

4.1 MASSA

(a) Warmgewalste Grofplaat word gewals in millimeterdiktes.

(b) Die normale digtheid van staal vir 1 vierkante meter van 1 millimeter dik = 7,85 kg. Warmgewalste Grofplaat word verkoop teen 'n prys per ton. Om massa vanaf dikte te bereken moet kroon - en oor toleransies op wydte en lengte in berekening gebring word dan is die basis van berekening: 1 vierkante meter, 1 mm dik het 'n massa van 8,039 kg.

4.1 MASS

(a) Hot Rolled Plates are rolled to millimeter thicknesses.

(b) The normal density of steel 1 sq metre of sheet 1 mm thick = 7,85 kg. Hot Rolled Plates are sold on a price per ton basis. To convert mass from thickness taking into account crown and over tolerance on width and length the following formula applies: 1 square meter of sheet 1 mm thick = 8,039 kg.

4.2 MASSATOLERANSIE (Gesnyde Lengtes) Massatoleransie van een dikte en grootte in die volgende tabel is van toepassing op versendings of gedeelte daarvan na een bestemming. (In een of meer versendings of gedeelte daarvan is die toleransie vir daardie spesifieke massa van toepassing):-

4.2 MASS TOLERANCE (Cut Lengths) Mass tolerances of one thickness and size in the following table apply to consignments or portion of consignments to one destination. (In one or more consignments or any portion of one consignment the tolerance for that particular mass applies):

MASSA (TON)	MASSATOLERANSIES/MASS TOLERANCES %
MASS (TONS)	BO (+) EN ONDER (-) OVER (+) AND UNDER (-)
1 - 2,5	8
> 2,5 - 4,5	7
> 4,5 - 13,5	6
> 13,5 - 22,5	5,5
> 22,5 -	5

Hierdie tabel is nie van toepassing op materiaal in rolvorm nie.

This table does not apply to material in coil form.

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YSKOR BEPERK ISCOR LIMITED

HOTSTRIP PLATE THICKNESSES

4. TOLERANSIES (VERVOLG) / TOLERANCES (CONTINUED)

4.3 DIKTETOLLERANSIES
4.3.1 ROLLE 4,5 - 12 mm EN GESNYDE LENGTES 4,5 - 12,0 mm

4.3 THICKNESS TOLERANCES
4.3.1 COILS 4,5 - 12 mm AND CUT LENGTHS 4,5 - 12,0 mm

WYDTEREEKS/ RANGE OF WIDTHS (mm)	GESPESIFISEERDE DIKTE/SPECIFIED THICKNESS (MM) *DIKTE TOLERANSIES IN mm BO (+) EN ONDER (-) *THICKNESS TOLERANCES IN mm OVER (+) AND UNDER (-)			
	> 10 - 12	> 6,6 - 10,0	> 5,8 - 6,6	4,5 - 5,8
600 - 800	0,36	0,30	0,28	0,20
> 800 - 1 000	0,36	0,30	0,28	0,20
>1 000 - 1 225	0,36	0,30	0,28	0,23
>1 225 - 1 525	0,36	0,33	0,30	0,28
>1 525 - 1 800	0,36	0,33	0,30	0

* Dikte word gemeet by enige punt op die plaat minstens 10 mm van die kant af.

* Thickess is measured at any point on the sheets not less than 10 mm from the edge.

4.3.2 SMALBAND

4.3.2 SLIT STRIP

GESPESIFISEERDE DIKTE IN mm/SPECIFIED THICKNESS IN mm		
> 6,6 - 10,0	> 5,8 - 6,6	4,5 - 5,8
(a) DIKTETOLERANSIES (mm) OOR (+) ONDER (-)/ THICKNESS TOLERANCES (mm) OVER (+) UNDER (-)		
0,30	0,28	0,23

(a) Dikte word gemeet by enige punt op die smalband minstens 10 mm van die kant.

(a) Thickness is measured at any point on the strip not less than 10 mm from the edge.

4.4 WYDTE- EN LENGTETOLERANSIES
4.4.1 ROLLE
GESNYDE LENGTES (⩾ 4,5 mm dik)
(Nie Haaksgesny nie)

4.4 WIDTH AND LENGTH TOLERANCES
4.4.1 COILS
CUT LENGTHS (⩾ 4,5 mm thick)
(Not Resquared)

WYDTE/WIDTH		LENGTE/LENGTH	
GESPESIFISEERDE WYDTE SPECIFIED WIDTH (mm)	TOLERANSIE BO GESPESIFISEERDE WYDTE TOLERANCE OVER SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE SPECIFIED LENGTH (mm)	TOLERANSIE BO GESPESIFISEERDE LENGTE TOLERANCE OVER SPECIFIED LENGTH (mm)
⩾ 600 - 1 200	5	⩽ 1 500	13
> 1 200 - 1 500	6	> 1 500 - 3 000	19
> 1 500 - 1 800	8	> 3 000 - 4 000	25
		> 4 000 - 4 900	32
		> 4 900 - 6 000	

Wydte en lengte toleransie niks onder nie.

Width and length tolerance nothing under.

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4. TOLERANSIES (VERVOLG) / TOLERANCES (CONTINUED)

4.5 WYDTETOLERANSIES SMALBAND

Die volgende afwykings van gespesifiseerde wydtes word toegelaat:-
(As gevolg van die hoek wat ontwikkel op die gesnyde kante, word die wydte op die wydste gedeelte gemeet.)

4.5 WIDTH TOLERANCES SLIT STRIP

The following variations on specified widths are allowed:-
(Owing to the angle, developing on the sheared edges, the width is measured at the widest portion.)

DIKTE/ THICKNESS (mm)	WYDTES (mm) / WIDTHS (mm)				
	75 - 150	> 150 - 225	> 225 - 300	> 300 - 500	> 500 - 600
	AFWYKINGS OOR OF ONDER (mm) / VARIATIONS OVER OR UNDER (mm)				
4,5 - 6,3	0,40	0,50	0,60	0,80	1,00
> 6,3 - 10,0	-	0,60	0,70	1,00	1,00

4.6 KROMMINGTOLERANSIE

Kromming is die grootste afwyking tussen 'n sykant en 'n reguit lyn, gemeet met 'n reël tussen die uitholkant en 'n reguit lyn.

4.6.1 KROMMINGTOLERANSIE (Rolle)
25 mm in enige 6 000 mm.

4.6.2 KROMMINGTOLERANSIE (Gesnyde lengtes)
0,4% van lengte

4.6.3 KROMMINGTOLERANSIE (Smalband)

4.6 CAMBER TOLERANCE

Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straight edge.

4.6.1 CAMBER TOLERANCE (Coils)
25 mm in any 6 000 mm.

4.6.2 CAMBER TOLERANCE (Cut lengths)
0,4% of length

4.6.3 CAMBER TOLERANCE (Slit Strip)

WYDTE/ WIDTH (mm)	TOLERANSIE/ TOLERANCE
⩾ 75 mm	6,5 mm in enige 2 500 mm
⩾ 75 mm	6,5 mm in any 2 500 mm

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4.7 TOLERANSIES (VERVOLG)
TOLERANCES (CONTINUED)

4.7 PLATHEIDSTOLERANSIES

Die toelaatbare afwyking in die plat oppervlak vir plate tot 3,7 m in lengte of vir enige 3,7 m van langer plate, is soos aangedui in die volgende tabel:-

4.7 FLATNESS TOLERANCES

Permissible variations from flat surface for plates up to 3,7 m in length or for any 3,7 m of longer plates, are as shown in the following table:-

GESPESIFISEERDE DIKTES	PLATHEIDSTOLERANSIE VIR GESPESIFISEERDE WYDTES (mm) (MAKSIMUM AFWYKING VAN HORISONTALE PLAT OPPERVLAK)			
SPECIFIED THICKNESSES	FLATNESS TOLERANCE FOR SPECIFIED WIDTHS (mm) (MAXIMUM DEVIATION FROM HORIZONTAL FLAT SURFACE)			
mm	910	> 910 - 1220	> 1220 - 1520	> 1520 - 1830
4,5 - ≤ 6,5	14	19	24	32
6,5 - ≤ 9,5	13	16	24	24
9,5 - 12,0	13	14	16	16

4.8 ANDER KWALITEITE AS HANDELSKWALITEIT

Warmgewalste fynplaat word volgens A.S.T.M.-, BS- en ander spesifikasies geproduseer.

Tensy anders ooreengekom, word Warmgewalste Grofplaat in ooreenstemming met die betrokke spesifikasie gelewer.

4.8 QUALITIES OTHER THAN COMMERCIAL QUALITY

Hot Rolled Sheets are produced to A.S.T.M.-, BS- and other specifications.

Unless otherwise agreed upon, Hot Rolled Plates is supplied in accordance with the requirements o the relevant specification.

WARMBAND PLAATDIKTES — 5. ALGEMEEN — HOTSTRIP PLATE THICKNESSES

5.1 OORMAAT OF ONDERMAAT

(a) Vir elke item van 'n bestelling behou ons ons die reg voor om materiaal te voorsien binne die toleransies soos hieronder aangedui:-

MASSA VAN BESTELDE ITEMS OF DIE BEREKENDE MASSA VAN DIE AANTAL PYNPLAAT BESTEL MASS OF ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF SHEETS ORDERED TON(S)	OORMAAT (+) OVERAGE (+) TON(S)	ONDERMAAT (-) UNDERAGE (-) TON(S)
2 - < 5	+ 1	- 1
5 - < 10	+ 2	- 3
10 - < 20	+ 3	- 4
20 - < 40	+ 4	- 5
40 - < 100	+ 4	- 6
≥ 100	+ 6	- 10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Vir beperking op bogenoemde toleransies verwys bladsy P17 par. 10.

5.2.1 SAAMBIND IN BONDELS

(a) Gesnyde Lengtes (4,5 mm dik)
Pynplaat word behoorlik deur middel van bande in bondels van die volgende groottes gebind:-
(i) Vir wydtes < 1 225 mm
Ongeveer 2,5 ton
Ongeveer 5 ton
(ii) Vir wydtes > 1 225 mm
Ongeveer 5 ton
Die klant se naam en adres word op die boonste plaat van elke saamgestelde bondel aangebring.
Wanneer bondelgroottes van ongeveer 2,5 ton bestel word vir versending na 'n klant, behou ons, ons die reg voor om 'n aantal kleiner bondels saam te bind in een gesamentlike bondel van ongeveer 5 ton. In sulke gevalle word die klant se naam en versendingsadres slegs op die boonste bondel aangebring, terwyl die kleiner bondels so gemerk word dat dit maklik met die boonste bondel vereenselwig kan word. Klante moet op die bestelling aandui indien hulle enige probleme ondervind met hierdie saamgestelde bondels.

(b) Rolle
Pynplaat in rolle word stewig met bande gebind.
Rolle word in groepe saam geweeg, en gemiddelde massa bepaal deur die getal, is nie noodwendig die werklike massa van enige individuele rol nie.

(c) Smalband
(i) Enkelrolle of bondels rolle kan vir vervoerdoeleindes met staalband saamgebind word in saamgestelde bondels rolle. Die staalbande wat sulke saamgestelde bondels bind, kan deur die geadresseerde vir aflaaidoeleindes gesny word.
(ii) Bondels rolle word geweeg, en uit die getal rolle per bondel word 'n gemiddelde massa per rol bepaal. Die gemiddelde massa is nie noodwendig die werklike massa van enige rol nie.

5.1 OVERRANGE OR UNDERAGE

(a) For each item of an order we reserve the right to supply within the tolerances given below:-

Where a minimum or maximum quantity is specified the overage or underage will be the total of the applicable plus and minus tolerance.
For restrictions on the above tolerances refer page P17 par. 10.

5.2.1 BUNDLING

(a) Cut Lengths (4,5 mm thick)
Sheets are packed in bundles, suitably tied by means of bands, in the following sizes:-
(i) For widths < 1 225 mm
Approximately 2,5 tons
Approximately 5 tons
(ii) For widths > 1 225 mm
Approximately 5 tons
The customer's name and address are indicated on the top sheet of each composite bundle. When bundle sizes of approximately 2,5 tons are ordered for dispatch to one customer, we have the option of making up composite bundles up to approximate 5 tons by strapping together a number of the smaller bundles. In such cases, the customer's name and address are indicated on the top bundle only and each of the smaller bundles is marked so as to associate it with the top bundle. Customers should indicate on the order if any difficulties are experienced with these composite bundles.

(b) Coils
Sheets in coils are securely strapped with bands.
Coils are die weighed in groups, and the mass of the group averaged over the number of coils.
This average mass is not intended to be the actual mass of any individual coil.

(c) Slit Strip
(i) Individual coils or bundles of coils may be strapped together to form a composite bundle of coils for transporting purpose. Bands securing such composite coils can be cut by the consignee for off-loading purposes.

(ii) Coils will be weighed in bundles and the mass averaged over the number of coils in the bundle. The average mass is not intended to be the actual mass of any individual coil.

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5. ALGEMEEN (VERVOLG) / GENERAL (CONTINUED)

5.2.2 MERKING

(a) Gesnyde Lengtes (4,5mm dik)
Die boonste plaat van elke bondel word gemerk met die graad- of kwaliteitsimbool, dikte, lengte, wydte, en benaderde getal plate in die bondel.

(b) Rolle
Die kwaliteit, wydte en dikte word op elke rol, aangebring.

(c) Smalband
Elke bondel rolle word gemerk met die kwaliteit, wydte en dikte.
Opmerking: Wanneer 'n analisesertifikaat of 'n analise- en toetssertifikaat vereis word, sal die "gietnommer" op die bondel/rol aangetoon word.

5.3 MASSA VAN ROLLE
Bestellings vir rolle met 'n gespesifiseerde presiese massa word nie aanvaar nie.
Rolle kan bestel word tot 'n gespesifiseerde maksimum massa volgens bladsye P19 tot P20.
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word sal versending van die bestelling soos volg geskied:

(a) Minstens 80% in volmassarolle.
(b) Hoogstens 20% in ligmassarolle.

"Volmassarolle"
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, word rolle met 'n massa van minstens 65% van daardie maksimum massa gelewer.

"Ligmassarolle"
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, is "Ligmassarolle" rolle met 'n massa van minder as "volmassarolle" maar met minstens 25% van die maksimum massa hetsy gespesifiseer of omgereken.

5.4.1 ROLLE
Wanneer rolle bestel word, kan daar verwag word dat dit meer defekte (sweislasse, gate ensovoorts) en oppervlakgebreke as gesnyde lengtes sal hê aangesien dit nie moontlik is om gedeeltes wat gebreke bevat, af te keur of te sorteer soos in die geval van gesnyde lengtes.
'n Mate van teleskopering kan voorkom, maar hierdie teleskopieteit mag nie in die geval van enige enkele rol 30 mm oorskry nie.

5.4.2 WALSRANDROLLE

(a) Walsrandrolle word onafgewerk voorsien
Onafgewerk dui aan dat rolle direk vanaf die Warmbandwals voorsien word en normaalweg nie op 'n bykomstige eenheid vir inspeksie, monsterneming of rol grootte vermindering doeleindes herstel word nie.

(b) Swaelstertsnysels
Onafgewerkte Walsrandrolle word in die "Soos gewals" toestand voorsien, ongeknipte swaelstertsnysels sal tot 'n minimum beperk word.

(c) Rolpunte
Gedeeltes van die voor- en agterpunte van Walsrandrolle mag buite die dikte toleransie wees maar sal nie meer as 7 meters in totaal per rol wees nie op voorwaarde dat normale dikte toleransie van toepassing is (d.i. beperkte dikte toleransies nie gespesifiseer is nie).

5.4.3 HANDELS/TREKKWALITEIT
Warmgewalste Fynplaat word vervaardig om sover moontlik aan die vereistes van die klant se eindgebruik te voldoen. Klante word derhalwe versoek om ons te raadpleeg met die oog op die verkryging van geskikste materiaal vir hul vervaardigingsproses.

5.4.4 OLIE
Die korporasie sal materiaal met 'n goedgekeurde beskermde olie bedek wanneer gespesifiseer maar kan die dikte van die bedekking nie waarborg nie.

5.2.2 MARKING

(a) Cut Lengths (4,5mm thick)
The top sheet of each bundle will be marked to indicate grade or quality symbol, thickness, length, width and approximate number of sheets.

(b) Coils
Each coil is marked with the quality width and thickness.

(c) Slit Strip
Each bundle of coils is marked with the quality, width and thickness.
Note: When an analysis certificate or analysis and test certificate is required, the "Cast number" will be indicated on the bundle/coil.

5.3 MASS OF COILS
Orders for coils to a specified exact mass are not accepted. Coils may be ordered with a specified maximum mass in accordance with pages P19 to P20.
When coils are ordered to a specified maximum mass, the order is dispatched as follows:

(a) Not less than 80% in full mass coils
(b) Not more than 20% in light mass coils.

"Full Mass Coils"
When coils to specified maximum mass are ordered, then coils are supplied with a mass of not less than 65% of that maximum mass.

"Light Mass Coils"
When coils are ordered to a specified maximum mass, then "Light Mass Coils" are coils with a mass of less than "Full Mass Coils" but not less than 25% of the maximum mass specified or converted.

5.4.1 COILS
When coils are ordered, it must be expected that they will contain more defects (welds, holes etc.) and surface imperfections than cut lengths as it is not possible to reject and sort portions containing imperfections as is the case with cut lengths.
Some telescoping of coils may occur, but this telescopicity will not be more than 30 mm on any one coil.

5.4.2 MILL EDGE COILS

(a) Mill edge coils are supplied mill run
Mill run implies that coils are supplied straight off the Hot Strip Mill and are not normally rewound on a secondary unit for inspection, sampling or coil size reduction purposes.

(b) Fish Tails
Mill run mill edge coils are supplied as rolled, uncropped fish tails will, however be kept to a minimum.

(c) Coil ends
Portion of front and tail end of mill edge coils may be out of thickness tolerance but this will not be more than 7 metres in total per coil provided normal thickness tolerances apply (i.e. restrictive thickness tolerances are not specified).

5.4.3 COMMERCIAL/DRAWING QUALITY
Hot Rolled Sheets are produced to suit customers' end use as far as possible. Customers are, therefore requested to consult us, with a view to obtain material best suited for their manufacturing process.

5.4.4 OILING
The Corporation will coat material with an approved protective oil when specified but cannot guarantee thickness of coating.

5. ALGEMEEN (VERVOLG) GENERAL (CONTINUED)

5.5 EINDVERBRUIK

Ten spyte van die talle bykomende voorsorgmaatreëls wat getref word tydens die vervaardiging van grofplaat en smalband vir trekdoeleindes kan sekere vervaardigingsveranderlikes toegekom word wat almal buite Yskor se redelike beheer is, en wat kan bydra tot faling tydens vervaardiging en wat beskou moet word as deel van normale risiko tydens gebruik deur die koper. Yskor onderneem om, met die koper se instemming, 'n toelatingsvlak vir faling daar te stel.
Vir die doel van hierdie voorstel, word faling omskryf as onherstelbare dele, gebreek tydens vorming en as skrot geklassifiseer. Dele met lamelleersels toon en wat uit pypvorming voortspruit, kan uitgesluit word, mits dit afsonderlik uitgeken word. Gebreekte dele wat herwin kan word, word nie in hierdie prosedure gedek nie.
Hierdie prosedure is bedoel om 'n falingstoelating daar te stel sonder die nodigheid vir herondersoek van elke gestempelde produk wat gebreek het. Dit sal geld vir algehele faling van 'n gegewe deel wat 1% oorskry, tot en met 8%. Inherente wisselings by staalfynplaat gewone wisselings by stempelings sluit bevredigende prestasie van 100% uit. Daarom word daar aanvaar dat praktiese volmaaktheid bereik word wanneer 99% van die stempelings sonder faling geproduseer word. Wanneer algehele faling hoër as 8% is, word dit beskou as dié resultaat van buitengewone stempeltoestande, en hierdie metode geld dan nie.
Die prosedure vir die bepaling van 'n falingstoelating vir 'n uitgekende deel word gegrond op die gemiddelde persentasie faling van daardie deel, een stel stempelhouers gedurende minstens twee opeenvolgende maande, of persiklusse, watter een ook al van toepassing is. (Die minimum monstergrootte is 1 000 stukke.) Die gemiddelde wat aldus bepaal word, sal beskou word as die toelating vir die deel.
Afsonderlike hysvragte of rolle wat onredelik hoë of 'n buitengewoon hoë mate van wisseling t.o.v. faling vertoon, sal nie oorweeg word by die bepaling van die toelating nie. Sodanige materiaal moet eenkant geplaas en die verskaffer laat weet word.
Gevalle kan voorkom waar buitengewoon moeilike fatsoene getrek moet word en waar daar twyfel kan bestaan oor die korrekte keuse van 'n geskikte staal, of die stempelhouerontwerp kan foutief wees. In sodanige gevalle sal die beoordeling van die geldigheid van 'n koper se eis die gebruik vereis van metodes vir die bepaling van die plastiese deformasie van die plaatstaal vir die werklike persstukke gebruik.
Die metodes wat gebruik moet word by die bepaling van die plastiese deformasie van die staal word in breë trekke beskryf in die SAE-handboek onder SAEJ863C. Die bevoorkeurde metode is die "Circle Grid Method".
In die afwesigheid van inligting wat gegrond is op monsters van die verdagte staal, wat kan bewys dat die staal bevraagtekenbare meganiese eienskappe het, sal dit 'n vereiste wees dat 'n toets, soos in breë trekke in SAE J863C beskryf, uitgevoer word en dat die resultate beskikbaar moet wees gedurende enige klagteondersoek.

5.5 END USE

In spite of the many extra precautions exercised in making plates and strip for drawing purposes certain manufacturing variables may be encountered all beyond Iscor's reasonable control, which may contribute to breakage in manufacture and must be considered as part of the normal hazard during the purchaser's use. Iscor will undertake to establish, with the purchaser's concurrence a breakage allowance level.

Breakage, for the purpose of this proposal, is defined as irreparable parts, broken during drawing and classed as scrap. Parts showing laminations, resulting from pipe, may be excluded, provided they are separately identified. Broken parts that can be salvaged are not covered in this procedure.

This procedure is intended to establish a breakage allowance without the need for reinspection of each broken stamping. This will apply to overall breakage on a given part in excess of 1% up to and including 8%. Inherent variations in steel sheets and normal variations in stamping operations preclude 100% satisfactory performance. Therefore it is accepted that practical perfection is attained when 99% of the stampings are produced without breakage. When the overall breakage is in excess of 8%, it is considered to be the result of abnormal stamping conditions, and this method does not apply then.

The procedure for determining a breakage allowance for an identified part is based on the average percentage of breakage on that part, one set of dies, during at least two consecutive months, or press cycles, whichever is applicable. (The minimum sample size is 1 000 pieces). The average thus determined shall be considered the allowance for the part.

Individual lifts or coils which exhibit unreasonably high or unusually variable breakage will not be considered in determining the allowance. Such material should be set aside and the supplier notified.

Cases may arise where abnormally difficult shapes are to be drawn and where doubt may exist as to the correct selection of suitable steel or the design may be at fault. In such cases the assessment of the validity of a purchaser's claim will require the use of methods of determining the plastic deformation of the steel used in the actual pressings.

The methods to be employed for the determination of the plastic deformation of the steel are outlined in the SAE Handbook under SAE J863C, the prererred method being the Circle Grid Method.

In the absence of information based on samples of the suspect steel, which may prove that the steel has questionable mechanical properties, it will be mandatory that a test using the procedures as outlined in SAE J863C be performed and the results be available during any complaint investigation.

(CONTINUED)

5.5 EINDVERBRUIK (VERVOLG)

Dit sal uit die voorgaande prosedures duidelik blyk dat die daarstelling van 'n omvattende afkeurvlak vir klante nie moontlik is nie, veral wanneer klante by die vervaardiging van 'n verskeidenheid verskillende persstukke betrokke is. Gevalle sal afsonderlik behandel moet word, en falingstoelatings sal vir elke uitgekende deel vasgestel moet word.
Die prosedure wat hierbo in breë trekke beskryf is, lei tot die gevolgtrekking dat watter aanvaarbare falingsvlak ook al vasgestel word betrekking sal hê op die besondere persstuk. Enige verandering aan die ontwerp, byvoorbeeld 'n modelverandering, sal die vasstelling van 'n nuwe aanvaardingsvlak noodsaak.

5.5 END USE (CONTINUED)

It will be clear from the foregoing procedures that the establishment of a blanket rejection level for customers is not possible, particularly where customers are engaged in manufacturing a variety of different pressings. Cases will have to be dealt with individually and breakage allowances be established for each identified part.
The procedure outlined above infers that whatever the acceptable breakage level established it will relate to the particular pressing. Any change to the design, such as for example a model change, will necessitate the establishment of a new acceptance level.

6. CORTEN

Waar deur-dikte sterkte en/of goeie vormbaarheid verlang word, moet Corten A-F in voorkeur bo Corten A gespesifiseer word.

Where through thickness strength and/or good formability is required Corten A-F should be specified in preference to Corten A.

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DECLASSIFIED

WARMBAND PLAATDIKTES / HOTSTRIP PLATE THICKNESSES

ALGEMEEN/GENERAL

EISE : TOELATINGSBELEID

1. INLEIDING

By die produksie van warmgewalste, koudgewalste en versinkte fynplaat is daar afwykings wat inherent is in die staal en die verwerking daarvan, wat verhoed dat dit geheel en al aan die vereistes voldoen ten opsigte van die produkeienskappe wat deur die klant verlang word.

Die inligting hieronder uiteengesit, is veronderstel om aan die Korporasie se Klante 'n duidelike beeld te gee van sy verantwoordelikhede met betrekking tot die mees algemene afwykings in fynplaat wat in rolle en gesnyde lengtes vervaardig word.

2. OPPERVLAKINSPEKSIE

Dit is gewone praktyk om die boonste oppervlak van gesnyde lengtes te inspekteer, wanneer dit van rolle in lengtes gesny word. Rolle word nie geïnspekteer nie, maar die kant met die gespesifiseerde oppervlak-afwerking sal aangedui wees. Omdat die bokant van 'n gesnyde lengte of aangeduide kant van 'n rol die kant is met die gespesifiseerde oppervlakafwerking mag die anderkant meer dikwels oppervlakimperfeksies bevat. Voorsorg maatreëls moet getref word om die aangeduide kant te gebruik vir die kritiese oppervlak van 'n gefabriseerde onderdeel te gebruik.

Rolle bevat meer oppervlakimperfeksies as gesnyde lengtes aangesien dit nie moontlik is om die gedeeltes wat die imperfeksies bevat af te keer en te sorteer, soos in die geval van gesnyde lengtes nie.

3. WALSDEFEKTE WAARVOOR GEWYSIGDE EISTOELATINGS GEMAAK KAN WORD

3.1 Gesnyde Lengtes

3.1.1 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

3.1.2 Herstelbare imperfeksies (verwys par. 5).

3.2 Rolle

3.2.1 Binne- en Buiteomwindsels slegs vir materiaal wat tot dikte teruggesny is.

OPMERKING:

(a) Warmgewalste walsrandrolle word direk vanaf die Warmbandwalse voorsien, en mag tot en met 7 meters buite dikte toleransie per rol (albei ente ingesluit) bevat wat onvoorwaardelik deur die klant aanvaar moet word.

(b) Koudgewalste rolle wat sonder terugsnyding tot dikte bestel word, mag tot 50 meters (albei ente ingesluit) buite diktetoleransie wees, wat die klant moet aanvaar sonder om enige eis in te stel.

3.2.2 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

4. TOELATINGSBELEID

Walsdefekte wat afkeurings tot gevolg het, wat die persentasie hieronder gespesifiseer oorskry, kan op Yskor se rekening geplaas word in die grondslag van 'n gemyfigde eistoelating.

Die nakoming moet gebaseer word op minstens 50% van die bestelde massa per omstrede item.

4.1 Gesnyde lengtes

4.1.1 Toelaatbare persentasie afkeurings ten opsigte van bestelde massa per item - 1%.

4.1.2 Afsonderlike pakke

8% afkeurings moet aanvaar word sonder dat enige eis ingestel word.

Enige pak met 'n klaarblyklike hoë frekwensie van walsimperfeksies mag opsy gesit word vir klagteondersoek.

Wanneer daar vasgestel word dat afkeurings meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n pak so spoedig as prakties moontlik staak, nadat die 8% minimum van die verskeepte massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die afkeurings 8% of minder is, moet die afkeurings ingesluit word vir die bepaling van die algehele gemiddelde vlak van afkeuring (verwys paragraaf 4.1.1.). Indien meer as 8% sal die pak onderworpe wees aan afsonderlike

CLAIMS : ALLOWANCE POLICY

1. INTRODUCTION

The production of Hot Rolled, Cold Rolled and Galvanised sheet involves variations inherent in the steel and processing, which prevent the realisation of complete conformity to the product attributes desired by the customer.

The information set forth below is intended to give the Corporation's Customers a clear understanding of its responsibilities relating to the most common variations in sheet produced in coils and cut lengths.

2. SURFACE INSPECTION

It is common practice to inspect the top surface of cut lengths as they are sheared to length from coils. Coils are not inspected, but the side with the specified surface finish will be identified. Because the top side of a cut length or identified side of a coil is the side with the specified surface finish, the opposite side may contain more frequent surface imperfections.

Precautionary measures should be taken to use the identified side for the most critical surface of a fabricated part.

Coils contain more surface imperfections than cut lengths as it is not possible to reject and sort portions containing such imperfections, as is the case with cut lengths.

3. MILL DEFECTS FOR WHICH ADJUSTED CLAIM ALLOWANCE CAN BE MADE

3.1 Cut Lengths

3.1.1 Non-repairable imperfections (surface and/or breakage).

3.1.2 Repairable imperfections (refer paragraph 5).

3.2 Coils

3.2.1 Inner and outer wraps for material cut back to thickness only.

NOTE:

(a) Mill rum, mill edge coils are supplied direct from the Hot Strip Mills and may contain up to 7 metres per coil (both ends included) out of thickness tolerance which customer must accept without claim.

(b) Cold-rolled coils ordered not cut back to thickness, may contain up to 50 metres (both ends included) out of thickness tolerance which the customer must accept without claim.

3.2.2 Non-repairable imperfections (surface and/or breakage).

4. ALLOWANCE POLICY

Mill defects resulting in rejections exceeding the percentage specified below are chargeable to Iscor on an adjusted claim allowance basis.

The performance must be based on at least 50% of the ordered mass per item in dispute.

4.1 Cut Lengths

4.1.1 Percentage reject allowance on ordered mass per item - 1%.

4.1.2 Individual lifts

8% rejections must be accepted without claim.

Any lift with an apparently high frequency of mill imperfections may be set aside for claims investigation.

When rejections are determined to be over 8%, at least 8% of the lift will have to be processed to enable a reasonable assessment to be made of the reject level. The processor should discontinue the processing of such a lift as promptly as practicable after processing the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications. If rejections are 8% or less, these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.1.1). If more than 8%, the lift will be subject to separate negotiation.

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EISE : TOELATINGSBELEID (VERVOLG)

4.2 Rolle

4.2.1 Toelaatbare persentasie afkeurings op bestelde massa per item:
3% op 200 ton en meer
4% op 100 ton tot onder 200 ton
5% op onder 100 ton
Bogenoemde toelaatbare persentasie afkeurings kan soos volg gewysig word:

(a) Dit sal met 1% verminder word as 3.2.1. nie in die afkeuringsakkumulering ingesluit is nie.

(b) Dit sal met 1% verminder word as 3.2.2 nie in die afkeuringsakkumulering ingesluit is nie.

4.2.2 Afsonderlike rolle
10% afkeurings moet aanvaar word sonder dat enige eis ingestel word. Enige rol met klaarblyklike hoë frekwensie van walsimperfeksies, mag opsy gesit word vir klagteondersoek.
Wanneer daar vasgestel word dat afkeurings meer as 10% uitmaak sal minstens 10% van die rol verwerk moet word, om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n rol so spoedig as prakties moontlik staak, nadat die 10% minimum van die verskeepte massa van die afsonderlike rol verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die afkeurings 10% of minder is, moet die afkeurings ingesluit word in die bepaling van die algemene gemiddelde vlak van afkeuring (verwys na paragraaf 4.2.1). Indien meer as 10%, sal die rol onderworpe wees aan afsonderlike onderhandeling.

5. EISE VIR METAALAFWERKING VAN HERSTELBARE IMPERFEKSIES VAN TOEPASSING OP MATAFWERKING-BLOOTGESTELDE BUITEAANWENDINGS (ISF) ALLEEN (VOORSIEN AS GESNYDE LENGTES)
Die materiaal word gelewer met dien verstande dat 'n mate van herverwerking deur die klant aanvaarbaar moet wees. Ooreenkomstig die algemene eisetoelatingsbeleid is die volgende van toepassing:

5.1 Totale massa per bestelde item
Tot en met 1% metaalafwerking van fynplate moet deur klant aanvaar word sonder dat enige eis ingestel word. 1% beteken hier dat 1% van die oppervlakarea metaalafgewerk moet wees.

5.2 Afsonderlike pakke
8% metaalafwerking moet aanvaar word sonder dat enige eis ingestel word. Enige pak wat klaarblyklik 'n hoë frekwensie van metaalafwerking vereis, mag opsy gesit word vir klagteondersoek. Wanneer daar vasgestel word dat die metaalafwerking verlang meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die metaalafwerking verlang. Die verwerker moet die verwerking van so 'n pak so spoedig as prakties moontlik staak, nadat die 8% minimum van verskeepte massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die metaalafwerking verlang 8% of minder is, moet die metaalafwerking verlang ingesluit word vir die bepaling van die algehele gemiddelde vlak van metaalafwerking (verwys na paragraaf 5.1).
Indien meer as 8% sal die pak onderworpe wees aan afsonderlike onderhandeling.

5.3 Eise vir herstelbare defekte van toepassing op ander oppervlakafwerkings en/of produkte (bv. warmgewals) word nie normaalweg deur die Korporasie aanvaar nie, hoewel, enige sodanige eis wat ingedien word sal volgens meriete behandel word en is onderhewig aan onderhandeling.

6. ALGEMEEN
Die bedrag van enige eis is beperk tot die prys wat vir die betrokke produk betaal is, plus vervoerkoste deur die koper betaal.
Die werklike toelating is die totale persentasie van opgehoopte afgekeurde persentasies gebaseer op massa per bestelde item, min die verhaalbare waarde.

CLAIMS : ALLOWANCE POLICY (CONTINUE)

4.2 Coils

4.2.1 Percentage rejects allowance on ordered mass per item:
3% on 200 tons and over
4% on 100 tons to under 200 tons
5% on under 100 tons
Adjustment to the above percentage allowance may be made as follows:

(a) 1% will be deducted when 3.2.1 is not included in the rejection accumulations.

(b) 1% will be deducted when item 3.2.2 is not included in the rejection accumulations.

4.2.2 Individual coils
10% rejections must be accepted without claim. Any coil with an apparently high frequency of mill imperfections, may be set aside for claims investigations. When rejections are determinde to be over 10% at least 10% of the coil will have to be processed to enable a reasonable assessment to be made of the reject level. The processor must discontinue the processing of such coil as promtly as practicable after processing the 10% minimum of shipped mass of the individual coil in order to preserve the possible usefulness of the material for other applications. If rejections are 10% or less these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.2.1). If more than 10%, the coil will be subject to separate negotiation.

5. CLAIMS FOR METAL FINISHING OF REPAIRABLE IMPERFECTIONS APPLICABLE TO MATT FINISH EXPOSED EXTERIOR APPLICATIONS (ISF) ONLY (SUPPLIED AS CUT LENGTHS)
This material is supplied on the distinct understanding that some reworking by the customer is to be acceptable. In line with the general claims allowance policy the following will apply:

5.1 Total mass per item ordered
Up to 1% metal finishing of sheets must be accepted by customer without claim. 1% here means 1% surface area to be metal finished.

5.2 Individual lifts
8% metal finishing must be accepted without claim. Any lift apparently requiring a high frequency of metal finishing may be set aside for claims investigation. When metal finishing required is determined to be over 8% at least 8% of the lift must be processed to enable a reasonable assessment to be made of the metal finishing required. The processor must discontinue the processing of such lifts as promptly as practicable after processing of the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications.

If metal finishing required is 8% or less, the metal finishing required must be incorporated for determining the overall average metal finishing level (refer to paragraph 5.1).
If more than 8%, the lift will be subject to a separate negotiation.

5.3 Claims for repairable defects applicable to other surface finishes and/or products (e.g. hot rolled) would not normally be accepted by the Corporation. However, any such claim submitted will be treated on merit, and would be subject to negotiation.

6. GENERAL
The amount of any claim is limited to the price paid for product concerned, plus transportation charges paid by the buyer.
The actuale allowance will be the total percentage of accumulated rejection percentages, based on mass per ordered item, less the recovery value.

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S.P.E. 120

YSKOR BEPERK ISCOR LIMITED

WARMGEWALSTE FYNPLAAT

ROLLE - SMALBAND - LENGTES

HOT ROLLED SHEETS

COILS - SLIT STRIP - LENGTHS

DECLASSIFIED

WARMGEWALSTE FYNPLAAT
ROLLE/SMALBAND/LENGTES

HOT ROLLED SHEETS
COILS/SLIT STRIP/LENGTHS

A. PRYSE / PRICES

1. **BASISPRYS**
(Gebaseer op Handelskwaliteit warmgewals, kantgesny en nie tot dikte teruggesny nie)

(a) PWV 1) -gebied R378-50
1000 kg v.o.s. Yskorwerke, Vanderbijlpark (Sylyn 1414, Bijlkor) plus padvervoer/spoorvervoer.

(b) Buite PWV 1) -gebied R378-50
1000 kg v.o.s. Germiston plus spoorvervoer.

1) Verwys kontrolelys par. C.

1. **BASIS PRICE**
(Based on Commercial Quality, hot rolled, side-trimmed and not cut back to thickness)

(a) PWV 1) area R378-50
1000 kg f.o.r. Iscor Works, Vanderbijlpark, (Siding 1414, Bijlkor) plus cartage/railage.

(b) Outside PWV 1) area R378-50
1000 kg f.o.r. Germiston plus railage.

1) Refer Check List par. C.

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS / QUANTITY EXTRAS AND DEDUCTIONS

2.1 **ITEMEKSTRAS/AFTREKKINGS**
Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op enige enkele bestelling vir versending op 'n keer soos dit die Werke pas, na een bestemming.

2.1 **ITEM EXTRAS/DEDUCTIONS**
The following extras and deductions are applicable to the calculated mass of each item on any one order for dispatch at one time, at Works convenience to one destination.

ITEM 1) TON/TONS	EKSTRA/EXTRA R.c./TON	AFTREKKING/DEDUCTION R.c./TON
2 - < 5	71-90	
5 - < 10	45-45	
10 - < 20	22-65	
20 - < 40	11-35	
40 - < 80	5-65	
80 - < 150	0-00	0-00
150 - < 300		3-75
300 - < 500		5-65
⩾ 500		11-35

OPMERKINGS:
Minimum massa per item

(a) Alle materiaal ⩽ 1225 mm wyd:
10 ton/item (10 ton/item aanvaarbaar vir Handelskwaliteit gesnyde lengtes in standaard wydtes en diktes alleenlik).

(b) Alle materiaal > 1225 mm wyd:
20 ton/item (< 20 tons/item op aansoek).

NOTES:
Minimum mass per item

(a) All material ⩽ 1225 mm wide:
10 tons/item (10 tons/item acceptable for Commercial quality, cut lengths in standard widths and thicknesses only).

(b) All material > 1225 mm wide:
20 tons/item (< 20 tons/item on application.

3. GROOTTE-EKSTRAS / SIZE EXTRAS

3.1 **STANDAARD-WYDTE EN DIKTE-EKSTRAS**
3.1.1 **SMALBAND IN ROLLE**
(Teruggesny na dikte)

3.1 **STANDARD WIDTH AND THICKNESS EXTRAS**
3.1.1 **SLIT STRIP IN COILS**
(Cut back to thickness)

STANDAARD-DIKTE STANDARD THICKNESS mm	WYDTE (mm) - STANDAARD - 5 mm TRAPPE - NIE-STANDAARD - 1 mm TRAPPE WIDTH (mm) - STANDARD - 5 mm INCREMENTS - NON-STANDARD - 1 mm INCREMENTS					
	25 - <50 R.c.	50 - <75 R.c.	75 - <150 R.c.	150 - <250 R.c.	250 - <400 R.c.	400 - <600 R.c.
4,0	-	-	54-70	42-55	32-00	26-40
3,5	-	-	53-60	41-00	31-15	25-60
3,0	-	-	52-40	39-40	30-25	24-70
2,8	(a) 93-55	69-80	53-15	40-40	31-10	25-75
2,5	(a) 94-45	70-65	54-10	41-40	32-25	26-55
2,2	95-35	71-55	55-00	42-20	33-10	27-50
2,0	97-30	73-20	56-90	44-05	34-90	29-35
1,8	102-75	79-05	62-40	49-45	40-50	34-90
1,6	114-65	88-15	69-80	56-90	47-70	42-20

(a) Min. wydte 30 mm

(a) Min. width 30 mm

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Aflewerингsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer
2. PRODUK
   (a) Hoeveelheid
      (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - Spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - Sertifiseer
   (g) Oppervlak afwerking
   (h) Eind - Gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Wydte en Dikte
4. Lengte
5. Kwaliteit
6. Spesiale verwerkings/Metallurgiese vereistes
   (i) Verwerking
   (ii) Skoonbyt en olie
   (iii) Rekrig/Hersny/Haakssny
   (iv) Inspeksie
   (v) Toets -/Gietanalise sertifikate
7. Beperking op oor-/ondermaat
8. Verpakkingsekstras
9. Walsrandrolle
10. Invoerheffing (R10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport
2. PRODUCT
   (a) Quantity
      (total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - Specify
   (g) Surface finish
   (h) End uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Width and Thickness
4. Length
5. Quality
6. Special processing/Metallurgical requirements
   (i) Processing
   (ii) Pickling and oiling
   (iii) Stretcher levelling/ reshearing/resquaring
   (iv) Inspection
   (v) Test/Cast analysis certificates
7. Restriction on over-/underage
8. Packing extras
9. Mill edge coils
10. Import Levy (R10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

1981-10-01 Kanselleer en vervang uitgawe gedateer 1980-06-20
Cancels and supersedes issue dated

UNCONTROLLED

WARMGEWALSTE PLAAT
ROLLE/SMALBAND/LENGTES

HOT ROLLED SHEETS
COILS/SLITSTRIP/LENGTHS

4. KWALITEITSEKSTRAS
QUALITY EXTRAS

(Aangeduide analises is gietpotanalise)

(Indicated analyses are ladle analysis)

4.1 HANDELS KWALITEITE

4.1 COMMERCIAL QUALITIES

KODE CODE		EKSTRA/ EXTRA
		R.c.
123	Handelskwaliteit (koolstof 0,15% maks.) Commercial Quality (Carbon 0,15% max.)	0-00
098	SAE/AISI 1008 (C 0,10 maks. Mn 0,25 - 0,50))	9-25
2302	PROSESSERING/PROCESSING: GIETBLOK ALLEENLIK/INGOT CAST ONLY	
099	SAE/AISI 1010 (C 0,08 - 0,13% Mn 0,30 - 0,60))	9-25
184	SAE/AISI 1012 (C 0,10 - 0,15% Mn 0,30 - 0,60)) P 0,040% S 0,050% maks/max	9-25
112	SAE/AISI 1015 (C 0,12 - 0,18% Mn 0,30 - 0,60))	9-25
097	SAE/AISI 1017 (C 0,14 - 0,20% Mn 0,30 - 0,60))	9-25
600	SAE/AISI 1023 (C 0,19 - 0,25% Mn 0,30 - 0,60))	9-25
601	WQ1 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%)) P0,020% S0,028%	18-00
602	WQ2 (Welding Quality C 0,08 - 0,13%, Mn 0,30 - 0,60%)) maks/max	18-00
603	WQ3 (Welding Quality C 0,10 - 0,15% Mn 0,40 - 0,60%))	18-00
604	WQ4 (Welding Quality C 0,15 - 0,20% Mn 0,50 - 0,70%)) P0,025% S0,028%	18-00
605	WQ5 (Welding Quality C 0,20 - 0,25% Mn 0,70 - 0,90%)) maks/max	18-00

4.2 KOOLSTOF KWALITEITE

4.2 CARBON QUALITIES

KODE CODE		EKSTRA EXTRA R.c.
106	Skopgraafstaal en Hoëkoolstofveerstaal Shovel Steel and High Carbon Spring Steel SS10/83 (Min. 20 ton(s) per item) (C 0,60 - 0,75% Mn 0,60 - 0,75%)	105-75
107	Slytbestande plaat/ Hard-wearing plate - SS10/200 - C 0,40 - 0,55%, Mn 0,[illegible] - 1,00%	98-25
455	BS 970 Part 1 080M40 (slegs analise/analysis only)	104-75
456	BS 970 Part 1 070M55 (slegs analise/analysis only)	109-75
474	SAE 1035	101-25
332	SAE 1060 fynkorrel/fine grain	120-50

GROOTTEBEPERKINGS/SIZE LIMITATIONS

DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm)	
	ROLLE/COILS (b)	LENGTES/LENGTHS (b)
1,6 ≺1,8	600 - 700	600 - 700
1,8 ≺2,0	600 - 800	600 - 800
2,0 ≺2,2	600 - 1200	600 - 1200
2,2 ≺2,5	600 - 1320	600 - 1225
2,5 ≺2,8	600 - 1500	600 - 1225
2,8 ≺3,0	600 - 1680	600 - 1225
3,0 - 4,0	600 - 1800	600 - 1225 (a)

(a) 4,0 mm maks. dikte/max. thickness
(b) Vir wydte en dikte verhoudings groter as 500/1 is temperwalsing verpligtend - vir prysekstras - verwys bl. P7 Par. 5.1.7
(b) For width and thickness ratios in excess of 500/1, temper rolling is mandatory - for price extras refer page P7 para. 5.1.7

105	Ploegskottelstaal Plough Disc Steel - SS10/44 - C 0,75 - 0,90% Mn 0,60 - 0,80% (Min 20 ton(s) per item)	111-25
517	SAE 1085	115-25

GROOTTEBEPERKINGS/SIZE LIMITATIONS

Dikte/Thickness (mm)	Wydte/Width (mm) Rolle/Coils (a)	Lengtes/Lenghts
	Op aansoek/On application	
2 ≺ 2,5		
2,5 ≺ 2,8	600 - 1450	600 - 1225
2,8 ≺ 3,0	600 - 1630	600 - 1225
3,0 ≺ 3,6	600 - 1750	600 - 1225
3,6 - 4,0	600 - 1800	600 - 1225

(a) Vir dikte en wydte verhoudings groter as 500 - 1, is Temperwalsing verpligtend - Vir prys ekstras verwys Bls. P7 par. 5.1.7
(a) For thickness and width ratios in excess of 500 - 1, temper rolling is mandatory - For price extrass refer page P7. Par. 5.1.7

YSKOR BEPERK ISCOR LIMITED

HOT ROLLED SHEETS
COILS/SLIT STRIP/LENGTHS

3. GROOTTE-EKSTRAS (Vervolg)
SIZE EXTRAS (Continued)

3.1.2 ROLLE EN GESNYDE LEK TES

3.1.2 COILS AND CUT LENGTHS

STANDAARD DIKTE/ STANDARD THICKNESS mm	WYDTE (mm) - STANDAARD 25 mm TRAPPE - ° WIDTH (mm) - STANDARD 25 mm INCREMENTS - °							NIE-STANDAARD 5 mm-TRAPPE NON-STANDARD 5 mm INCREMENTS			
	600 - <800	800 - <925	925	>925 - <1000	1000	>1000 - <1200	1200	>1200 - <1500	1500	> 1500 - < 1800	1800
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
4,0	22-90	15-50	11-75	13-60	7-30	10-85	2-55	9-55	1-05	7-35	3-40
3,5	22-00	14-70	10-90	12-75	6-50	10-05	1-70	8-90	0-50	6-85	3-00
3,0	21-10	13-85	10-10	11-90	5-60	9-15	0-95	8-30	0-00	6-45	2-65
2,8	22-00	14-65	11-15	12-80	6-35	10-10	1-80	9-05	0-95	7-40	6-10
2,5	23-00	15-65	11-90	13-50	7-40	11-15	2-65	10-05	5-55	-	-
2,2	23-75	16-45	12-80	14-65	9-15	11-90	3-55	(a) 14-75	-	-	-
2,0	25-75	18-40	14-65	16-45	11-15	13-50	5-55	(b) 16-70	-	-	-
(c) 1,8	31-10	23-75	20-30	22-00	16-45	21-10	18-40	(b) 31-10	-	-	-
(c) 1,6	38-40	31-10	27-50	30-25	23-75	38-40	36-70	(b) 49-45	-	-	-

(a) Maks. wydte 1 300 mm
(b) Maks. wydte 1 225 mm
(c) Nie beskikbaar in Trekkwaliteite

OPMERKING:
Temperwals ekstras verwys P7 para. 5.1.7 en S6 para 4.9.1 nota (ii).

(a) Max. width 1 300 mm
(b) Max. width 1 225 mm
(c) Not available in Drawing qualities

NOTE:
Temper rolling extras refer P7 para 5.1.7 and S6 para 4.9.1 note (ii).

3.2 NIE-STANDAARDDIKTE-EKSTRAS
Vir diktes tussen twee standaarddiktes is die ekstra vir die standaarddikte (Par. 3.1) waarvoor die hoër ekstra geld, van toepassing, plus die volgende:

3.2 NON-STANDARD THICKNESS EXTRAS
For thicknesses between two standard thicknesses, the extra for the standard thickness (par. 3.1) bearing the higher extra applies, plus the following:

	DIKTE/THICKNESS	NIE-STANDAARDTRAPPE NON-STANDARD INCREMENTS	EKSTRA/ EXTRA
Rolle/Coils Lengtes/Lengths	1,6 - 4,0 mm	0,1 mm	8-25

3.3 NIE-STANDAARDWYDTE-EKSTRAS
Vir nie-standaardwydtes geld die ekstras soos in die wydte- en diktetabel aangetoon (par. 3.1), plus die volgende:
(a) Smalband - Nie-standaard trappe van 1 mm R8-25
(b) Fynplaat/Rolle - Nie-Standaard trappe van 5 mm R8-25

3.3 NON-STANDARD WIDTH EXTRAS
For non-standard widths the extras shown in the width and thickness tahle (par. 3.1) apply plus the following:
(a) Slit Strip - Non-standard increments of 1 mm R8-25
(b) Sheets/Coils - Non-Standard increments of 5 mm R8-25

3.4 STANDAARDLENGTE-EKSTRA
Wydtes 600 - 1800 mm

3.4 STANDARD LENGTH EXTRA
Width 600 - 1800 mm

DIKTE THICKNESS (mm)	LENGTE/LENGTH (m) TRAPPE VAN 25 mm / INCREMENTS OF 25 mm					
	1,0 - 1,5	> 1,5 - 2,0	> 2,0 - 3,0	> 3,0 - 4,0	> 4,0 - 5,0	> 5,0 - 6,1
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
2,0 - 4,0	22-00	20-30	18-40	19-15	20-30	23-75
1,6 - <2,0	23-75	22-00	20-30	21-10	-	-

OPMERKINGS:
(i) 1,6 - 1,8 mm dikte ... Maks. lengte 3,675 m
(ii) 1 225 mm wyd ... Min. lengte 1,8 m

NOTES:
(i) 1,6 - 1,8 mm thick ... Max. length 3,675 m
(ii) 1 225 mm wide ... Min. length 1,8 m

3.5 NIE-STANDAARDLENGTE-EKSTRA
Vir nie-standaardlengtes geld die ekstras soos in die standaardlengte tabel (par.3.4) plus die volgende:
Nie-standaard trappe van 5 mm R3-55

3.5 NON-STANDARD LENGTH EXTRA
For non-standard lengths the extras shown in the standard length table (Par. 3.4) apply plus the following:
Non-standard increments of 5 mm R3-55

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1982-01-01

1981-07-03

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4. KWALITEITSEKSTRAS (VERVOLG)/ QUALITY EXTRAS (CONTINUED)

4.4 SKEEPSPLAAT KWALITEITE / 4.4 SHIP PLATE QUALITIES

KODE/ CODE		EKSTRA/ EXTRA R.C.
126	Lloyds Register of Shipping - Grade A	10-25
119	ABS Grade A	10-25
411	ABS Grade B	24-25
	A. Bykomende Ekstras/Additional Extras	
3309	Bywoning van meganiese toetse deur (a) Lloyds opsiener (verpligtend)	6-70
3314	(b) ABS opsiener (verpligtend)	4-25
3309	Witnessing of mechanical tests by (a) Lloyds surveyor (mandatory)	6-70
3314	(b) ABS surveyor (mandatory)	4-25
	B. Sertifisering/Certification	
	Analise en toets sertifikaat word voorsien (hoef nie op bestelling gespesifiseer te word	
	Analysis and test certificate will be supplied (need not be specified on order)	
	C. Slagtoetse: Van toepassing op materiaal $<$25 mm vir ABS Grade B/	
	Impact tests: Applicable to material $<$25 mm for ABS Grade B	
3235	LTO (0°C) oorlangs/longitudinal	5-75
2787	LTO (0°C) dwars/transverse	11-75

4.5 TREK EN VOEG KWALITEITE / 4.5 FORMING EN DRAWING QUALITIES

KODE/ CODE		EKSTRA/ EXTRA R.C.
	§ B.S. 1449	
054	(a) KHR1	56-00
641	(a) HR2	28-75
642	(a) HR3	27-50
643	HR4	7-50

(a) Groottebeperkings (Fynplaat)/Size limitations (Sheets)

DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm)
$\geqslant$3	1 800 maks./max.
2,5 $<$ 3	1 500 maks./max.
2 $<$ 2,5	1 225 maks./max.

SUPRAFORM GRADE/SUPRAFORM GRADES

	GRAAD/ GRADE	MIN WYDTE/ MIN WIDTH (mm)	WYDTE/DIKTE VERHOUDING/ WIDTH/THICKNESS RATIO 1800 MAKS. WYDTE/MAX WIDTH	DIKTE REEKS/ THICKNESS RANGE (mm)	
585	190	800	600 : 1	1,6 - 4,0	10-50
578	220	800	550 : 1	1,8 - 4,0	29-00
577	250	800	550 : 1	1,8 - 4,0	31-50
582	290	800	550 : 1	1,8 - 4,0	33-75
551	TM 340 *	800	500 : 1	2,0 - 4,0	85-00
550	TM 380 *	800	500 : 1	2,0 - 4,0	90-75
552	TM 420 *	800	320 : 1	2,5 - 4,0	108-50
553	TM 460 *	800	320 : 1	2,5 - 4,0	125-75
527	TM 500 *	700	280 : 1	2,5 - 4,0	137-50

BEPERKINGS:
1. TM voorvoegsel beteken Termo-Meganies behandelde staal
2. *Bestellings onderhewig aan bevestiging met 20 ton (min.) items.
3. Die maksimum wydte tot dikte verhouding definieer die maksimum wydte wat vir enige gegewe dikte gewals kan word, onderhewig aan bogenoemde beperkings. Groottes buite hierdie reekse op aansoek.

LIMITATIONS:
1. TM prefix indicates Thermo-Mechanical treated steel.
2. *Orders subject to confirmation with 20 tons (min.) items.
3. The maximum width to thickness ratio defines the maximum width that can be rolled for any given thickness subject to the above limitations. Sizes outside these ranges - On application.

4. KWALITEITSEKSTRAS (VERVOLG)/
QUALITY EXTRAS (CONTINUED)

4.2 B.S. SPESIFIKASIES 4.2 B.S. SPECIFICATIONS

KODE/ CODE		EKSTRA/ EXTRA
	§ B.S. 4360/Part 2	
186	Grade 43A) Min. Dikte/Thickness 3 mm	7–50
202	Grade 43A/1)	6–50
203	Grade 50 B) Min. Dikte/Thickness – 3 mm	63–75
387	* BS 1449 Part 1 Grade HR 37/23	9–25
065	* BS 1449 Part 1 Grade HR 43/25	7–50
	* Groottebeperkings/Size Limitations	
	Dikte/Thickness (mm) Wydte tot dikteverhouding/Width to thickness ratio	
	1,6 tot/to < 1,8 500 : 1	
	⩾1,8 600 : 1	
	Vir wydte en dikteverhouding groter as 500 : 1 is temperwalsing verpligtend/	
	For width to thickness ratios in excess of 500 : 1 temper rolling is mandatory.	
512	** C.M.E. Simbool 8/Symbol 8	38–75
	** Word koperhoudend voorsien volgens spesifikasie/	
	Ekstra vir bywoning van toetse en oppervlakinspeksie deur die S.A.S. Inspekteur – / Extra for witnessing of tests and surface inspection by the S.A.R. Inspector –	
3313	(i) Bywoning van Meganiesetoetse ..... / (i) Witnessing of Mechanical tests ..	2–10
3329	(ii) Bywoning van oppervlakinspeksie ..... / (ii) Witnessing of surface inspection.	4–25
	** Supplied copper bearing in accordance with the specification	
	Groottebeperkings/Size Limitations	
	Dikte/Thickness (mm) Wydte/Width (mm) Dikte/Thickness (mm) Wydte/Width (mm)	
	1,6 – <2,0 950 maks/max. 2,5 – < 3,0 1500 maks/max.	
	2,0 – <2,5 1200 maks/max. ⩾3 1800 maks/max.	

4.3 KOPERHOUDENDE KWALITEITE 4.3 COPPER BEARING QUALITIES

KODE/ CODE		EKSTRA/ EXTRA
	B.S. 4360 Part 2 (Min. dikte 3 mm/min. thickness 3 mm)	R.c.
073	Grade 40A (Cu. 0,20 – 0,35%)	37–50
279	Grade 43A/1 (Cu. 0,20 – 0,35%) Min. 10 ton(s) per item	37–50
228	Grade 43A (Cu. 0,20 – 0,35%)	38–75
077	** Grade 50 B (Cu 0,20 – 0,35%) Min 10 ton(s) per item	95–00
	** Min Dikte/Thickness – 3 mm	
027	* A.S.T.M. A606 Type 2	55–75
	Wanneer in rolle verskaf, word die min. vloeispanning en min. treksterkte verlaag met 35 MPa.	
	When supplied in coil form, min. yield stress and min. tensile strength are reduced by 35 MPa.	
	* Groottebeperkings/Size Limitations	

DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm) ROLLE/COILS (mm) – LENGTES/LENGTHS (mm)
2,0 to < 2,2	600 – 1200
2,2 to < 2,5	600 – 1320
2,5 to < 2,8	600 – 1500
2,8 to < 3,0	600 – 1680
3,0 to 4,0	600 – 1800

(a) Vir wydte en dikte verhouding groter as 500/1 is temperwalsing verpligtend – vir prysekstras verwys bl. P7 par. 5.1.7
(a) For width to thickness rations in excess of 500/1 temper rolling is mandatory – for price extras refer to page P7 par. 5.1.7

DECLASSIFIED

DECLASSIFIED

WARMGEWALSTE PLAAT
ROLLE/SMALBAND/LENGTES

HOT ROLLED SHEETS
COILS/SLIT STRIP/LENGTHS

4.9 SPESIALE AANWENDINGS KWALITEITE — 4.9 SPECIAL PURPOSE QUALITIES

KODE/ CODE		EKSTRA/ EXTRA R.c.
008 191	* C.K.S. 149 Grade A * S.A.E. 950B Wanneer in rolle verskaf, word die min. vloeispanning en min. treksterkte verlaag met 35 MPa. When supplied in coil form, min. yield stress and min. tensile strength are reduced by 35 MPa. * Groottebeperkings/Size Limitations	43-25 49-25

DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm) ROLLE/COILS (mm) - LENGTES/LENGTHS (mm)
2,0 to < 2,2	600 - 1200
2,2 to < 2,5	600 - 1320
2,5 to < 2,8	600 - 1500
2,8 to < 3,0	600 - 1680
3,0 to 4,0	600 - 1800

(a) Vir wydte en dikte verhouding groter as 500/1 is temperwalsing verpligtend - vir prysekstras verwys bl. P7 par. 5.1.7
(a) For width to thickness rations in excess of 500/1 temper rolling is mandatory - for price extras refer to page P7 par. 5.1.7

059 S.A.E. 950 X — 78-25

Groottebeperkings/Size limitations

1. (Materiaal ≤ 3,0 mm dik vir eindgebruik litpale moet getemperwals word) (2073)
   (Material ≤ 3,0 mm thick for end use sectional poles must be temper rolled) (2073)
2. DIKTE/THICKNESS — Wydte tot dikteverhouding/Width to thickness ratio (maks./max.)
   2 - < 2,5 — 320:1
   2,5 - 4,0 — 550:1
   Vir 'n wydte tot dikteverhouding oor 500:1 is temperwalsing (kode 2073) verpligtend.
   For a width to thickness ratio exceeding 500:1 temper rolling (code 2073) is mandatory

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YSKOR BEPERK ISCOR LIMITED

HOT ROLLED SHEETS
COILS/SLIT STRIP/LENGTHS

4. KWALITEITSEKSTRAS (VERVOLG)/
QUALITY EXTRAS (CONTINUED)

4.6 ATMOSFERIESE ROESBESTANDE KWALITEITE 4.6 WEATHER RESISTING QUALITIES

KODE/ CODE		EKSTRA/ EXTRA R.c.
124	§§ Corten A	173-25
594	§§ B.S. 4360 Grade W.R. 50/A-1 (Min. 3 mm)	173-25
503	§§ Corten A-F	234-50
	Meganiese eienskappe soos vir Corten A behalwe soos andersinds ooreengekom/ Mechanical properties as per Corten A unless otherwise agreed.	
	§§ Groottebeperkings/Size Limitations	

DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm) (a) ROLLE EN LENGTES/COILS AND LENGTHS
2,0 to < 2,2	600 - 640 en/and 800 - 1160
2,2 to < 2,5	600 - 710 en/and 800 - 1280
2,5 to < 2,8	600 - 1450
2,8 to < 3,0	600 - 1630
3,0	600 - 1750

DIKTE/THICKNESS	ROLLE/COILS (mm)(a)	LENGTES/LENGTHS (mm)(a)
> 3,0 to < 3,6	600 - 1750	600 - 1225
3,6 to 4,0	600 - 1800	600 - 1225

(a) Vir materiaal met 'n wydte tot dikte verhouding groter as 500 : 1 is temperwalsing verpligtend. Vir prysekstras verwys bl.P7 par. 5.1.7

(a) For material with a width to thickness ratio in excess of 500 : 1 temper rolling is mandatory. For price extras refer to page P7 par. 5.1.7

4.7 PYP KWALITEITE 4.7 PIPE SPECIFICATIONS

KODE/ CODE		EKSTRA/ EXTRA R.c.
001	API 5L GRADE A	16-50
002	API 5L GRADE B	16-50

4.8 LAE DRUK GASSINLINDER KWALITEITE 4.8 LOW PRESSURE GAS CYLINDER QUALITIES

KODE/ CODE		EKSTRA/ EXTRA R.c.
130	Laedrukgassilinder-staal. Gr. 310 (Geskik vir die vervaardiging van silinders volgens S.A.B.S. 219) Low Pressure Gas Cylinder Steel - Gr. 310 (suitable for the manufacture of cylinders to S.A.B.S. 219) GROOTTEBEPERKINGS/ SIZE LIMITATIONS Dikte/Thickness (mm) — Wydte/Width (mm) 2,5 - 4,0 — 1 225 maks./max. 2,0 (min.) - < 2,5 — 1 075 maks./max.	90-75
082	Laedrukgassiliner-staal - Gr. 255 (Geskik vir die vervaardiging van silinders volgens S.A.B.S. 219) Low Pressure Gas Cylinder Steel - Gr. 255 (suitable for the manufacture of cylinders to S.A.B.S. 219)	45-50

DECTRACTILED

5. VERWERKINGSEKSTRAS (VERVOLG)
PROCESSING EXTRAS (CONTINUED)

	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER	APPLICABLE ONLY IF SPECIFIED ON ORDER	EKSTRA/ EXTRA
	5.2 METALLURGIESE-EKSTRAS EKSTRAS VIR BYWONING VAN TOETSE EN INSPEKSIE DEUR BUITE INSTANSIES	5.2 METALLURGICAL-EXTRAS EXTRAS FOR WITNESSING OF TESTS AND INSPECTION BY OUTSIDE AUTHORITIES	R.c.
	5.2.1 Bywoning van meganiesetoetse (uitgesluit Ultrasoniese toetse)	5.2.1 Witnessing of mechanical tests (excluding Ultrasonic testing)	
	(a) Deur Lloyds Opsiener vir -	(a) By Lloyds Surveyor for -	
3309	(i) Skeepsplaat A/B/Struktuurplaat	(i) Ship Plate A/B/Structural Plate	6-70
3310	(ii) Skeepsplaat C/D/E/Ketelplaat	(ii) Ship Plate C/D/E/Boiler plate	7-95
3311	(b) Deur Germanischer Lloyd Opsiener vir Skeepsplaat	(b) By Germanischer Lloyd Surveyor for Ship Plates	8-45
3312	(c) Deur klant	(c) By customer	4-25
	(d) Of sy verteenwoordiger anders dan in (a) of (b) genoem soos:	(d) Or his representative other than (a) or (b) above such as:	
3313	S.A. Spoorweë/S.A. Railways		2-10
3314	A.B.S.		4-25
3315	General Superintendence		4-25
3316	British Engine and Insurance		4-25
3317	T.U.V.		4-25
	(e) Vir elke verteenwoordiger bykomend tot (a), (b) of (c) bo genoem	(e) For each representative additional to (a), (b) or (c) above	8-45
	5.2.2 OPPERVLAK INSPEKSIE	5.2.2 SURFACE INSPECTION	
3328	(a) Deur klant	(a) By Customer	8-45
	(b) of sy verteenwoordiger soos:	(b) or his representative such as:	
3326	Lloyds		8-45
3327	Germanischer Lloyd		8-45
3329	S.A. Spoorweë/S.A. Railways		4-25
3330	A.B.S.		8-45
3331	General Superintendence		8-45
3332	British Engine and Insurance		8-45
3333	T.U.V.		8-45
	(c) Vir elke bykomende verteenwoordiger ..	(c) For each additional representative ...	16-90
	5.2.3 TOETS- EN/OF GIETANALISESERTIFIKATE (Gietpotanalise) Van toepassing op Handelskwaliteit	5.2.3 TEST AND/OR CAST ANALYSIS CERTIFICATES (Ladle analysis) Applicable to Commercial Quality	

PER ITEM TON(S)	GIETANALISE-SERTIFIKATE (GIETPOTANALISE) CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2003)	TOETS- EN GIETANALISE-SERTIFIKATE (GIETPOTANALISE) TEST AND CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2005)
	R.c.	R.c.
0 - 10	4-20	8-25
> 10 - 20	3-50	7-30
> 20 - 30	1-90	4-20
> 30 - 40	1-50	2-85
> 40	0-95	1-70

6. BEPERKING OP OOR- OF ONDERMAAT TOELATING

6. LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE
(Refer page S8 par. 5.1)

KODE/ CODE			EKSTRA/ EXTRA
2408	(i) 50% beperking van standaard oor- of ondermaat toelating	(i) 50% limitation of standard overage or underage allowance	R.c. 8-80
2409	(ii) Wanneer 2½% oor- of ondermaat van item massa gespesifiseer word ..... (Slegs van toepassing op items onder 100 ton)	(ii) When 2½% overage or underage of item mass is specified ..... Applicable only to items under 100 tons)	13-55
2440	(iii) (a) Vir gespesifiseerde minimum hoeveelhede	(iii) (a) For specified minimum quantities	3-50
2293	(b) Vir gespesifiseerde maksimum hoeveelhede (Uitsluitende ekstras vir beperkings op oor- of ondermaat)	(b) For specified maximum quantities (Excluding extras for restrictions on overage or underage)	3-50

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5. SPESIALE VERWERKINGSEKSTRAS/METALLURGIESE VEREISTES/ SPECIAL PROCESSING EXTRAS/METALLURGICAL REQUIREMENTS

KODE/ CODE	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER	APPLICABLE ONLY IF SPECIFIED ON ORDER	EKSTRA/ EXTRA
	5.1 Verwerkingsekstras	5.1 Processing extras	R.c.
	5.1.1 Toleransie-ekstra vir beperkte dikte - Terugsny na dikte (rolle) is verpligtend. Vir kleiner dikte-toleransies, maar minstens - 75% van	5.1.1 Restricted thickness tolerance extra - Cut back to thickness (coils) is compulsory. For closer thickness tolerances, but not more restrictive than	
2056	normale toleransie	75% of normal tolerance	12-50
2063	5.1.2 Rolle wat tot bestelde dikte teruggesny word	5.1.2 Coils cut back to ordered thickness	7-55
2015	5.1.3 Weeg van afsonderlike bondels/rolle en die aanbring van aangetekende massa op elke bondel/rol	5.1.3 Weighing of individual bundles/ coils and marking the recorded mass on each coil/bondle.....	2-05
2053	5.1.4 Smalband, rolle en lengtes - skoongebyt	5.1.4 Slit strip, coils and lengths - pickled	
2054	(a) Skoongebyte materiaal word gewoonlik, geolie met standaard walsolie voorsien.	(a) Pickled material is normally supplied oiled with standard mill oil	
	(b) Vir lae koolstof staal d.i. koolstof op tot en insluitende 0,25 persent.	(b) For low carbon steels i.e. carbon up to and including 0,25 percent	
	(c) Vir hoë koolstof staal d.i. koolstof oor 0,25 persent en hoë treksterkte staal bv. Corten maksimum dikte 4.0 mm.	(c) For high carbon steels i.e. carbon over 0,25 percent and high tensile steels e.g. Corten maximum thickness 4.00 mm.	
	(d) Die volgende wydte en dikte ekstras sal van toepassing wees:	(d) The following width and thickness extras will apply:	

DIKTE THICKNESS (mm)	SMALBAND SLIT STRIP	ROLLE/GESNYDE LENGTES § / COILS/CUT LENGTHS § WYDTE/WIDTH (mm)		
	<600 mm SOOS/AS PER S.P.E.	600 - < 700	700 -< 775	775 - 1 800
2,5 - 4,0 (Maks./Max.)	R36-65	§§ R51-30	§§ R44-05	R36-65
2,0 -< 2,5	R44-05	R63-45	R51-30	R44-05
1,8 -< 2,0	R49-45	R69-80	R58-60	R49-45
1,6 -< 1,8	R55-00	R77-20	R66-00	R55-00

§ Gesnyde lengtes - maks. dikte 4,0 mm
§§ Rolle - Maksimum dikte 3,5 mm skoongebyte rolle het gewoonlik sekere voue en kinkels.

§ Cut lengths - max. thickness 4,0 mm
§§ Coils - Maximum thickness 3,5 mm pickled coils normally have some folds & kink marks.

2058	5.1.5 Platrigstandaard van platheid (SLEGS FYNPLAAT) (nie van toepassing op skoongebyt en/of oliebedekte fynplaat nie) lengte maks. 4 300 mm min. 1 750 mm.	5.1.5 Levelled standard of flatness (SHEETS ONLY) (not applicable to pickled and/or oiled sheets) length max. 4 300 mm min. 1 750 mm
	5.1.6 HERSNY EN/OF HAAKSSNY (4,0 mm dik Maks. lengte 3,65 m)	5.1.6 RESHEARING AND/OR RESQUARING (4,0 mm thick Max. length 3,65 m)

NOMINALE MASSA PER FYNPLAAT NOMINAL MASS PER SHEET	TWEE KANTE (2466) TWO SIDES	VIER KANTE (2710) FOUR SIDES
⩽3 kg	R38-40	R45-80
>3 -< 6 kg	R33-10	R40-50
6 -<10 kg	R27-50	R34-90
10 -<15 kg	R20-30	R27-50
15 -<30 kg	R14-65	R22-00
30 -<50 kg	R9-15	R16-45
⩾50 kg	R5-55	R9-15

Hersny tot wydtes nouer as 600 mm ... Op aansoek/Reshearing to widths narrower than 600 mm ..On application

2073	5.1.7 TEMPERWALS EKSTRA (Slegs rolle) °	5.1.7 TEMPER ROLLING EXTRA (Coils only) °

DIKTE THICKNESS (mm)	WYDTE/WIDTH (mm)	
	800 - 1 000	> 1 000 - 1 800
	R.c./ton	R.c./ton
3,5 - 4,0	5-10	4-05
3,0 -< 3,5	5-65	4-45
2,5 -< 3,0	6-75	5-55
2,0 -< 2,5	8-25	6-80
1,6 -< 2,0	10-05	8-25

° Grootte beperkings - Dikte 4 mm maks. Wydte 1800 mm maks. Verwys P2 para 3.1.2 (Nota onder tabel)

° Size limitations - Thickness 4 mm max. Width 1800 mm max. Refer P2 para 3.1.2 (Note under table).

7. VERPAKKINGSEKSTRAS (VERVOLG)
PACKING EXTRAS (CONTINUED)

7.2 WARMGEWALSTE FYNPLAAT IN ROLLE

Rolle is beskikbaar tot 'n maksimum massa (uitgedruk in tonne) soos uitgedruk in die volgende tabel (Klante moet uit die tabel selekteer en op die bestelling die rolmassa spesifiseer wat die beste aan sy behoeftes voldoen).

7.2.1 EKSTRAS - ROLMASSA

Rolle met of sonder wiegdraers.

7.2 HOT ROLLED SHEETS IN COILS

Coils are available to a maximum mass (expressed in tons) as set in the following table (Customers should select from the table and specify on the order the coil size most suited to their requirements).

7.2.1 EXTRAS - COIL MASS

Coils with or without cradles.

MAKSIMUM MASSA VAN ROL/ MAXIMUM COIL MASS TON(S)	WYDTE REEKS/ WIDTH RANGE (mm)	MINIMUM DIKTE/ MIN. THICK-NESS (mm)	KODE/ CODE	TIPE VERPAKKING/TYPE OF PACKING			
				STANDAARD VERPAKKING SONDER BESKERMING/ STANDARD PACKING WITHOUT PROTECTION ROLLE/COILS		VOLBEDEKKING MET ROESWERENDE WATER-DIGTE PAPIER EN SKROTPLAAT/ FULL PROTECTION WITH RUST PREVENTATIVE WATERPROOF PAPER AND WASTER SHEETS	
				SONDER WIEG-DRAER/WITH-OUT CRADLE KODE/CODE 08	MET WIEG-DRAER/WITH CRADLE KODE/CODE 09	SONDER WIEG-DRAER/WITH-OUT CRADLE KODE/CODE 28	MET WIEG-DRAER/WITH CRADLE KODE/CODE 29
26	1300 - 1700	2,8	40				
	1701 - 1800	3,0		0,00	1,20	1,20	2,45
22	1100 - 1680	2,5	41	0,00	1,20	1,20	2,45
	900 - 1195	2,3					
19	1300 - 1650	2,3	42				
	1651 - 1800	3,0		0,00	1,20	1,20	2,45
	900 - 1395	1,6					
16	1600 - 1650	2,3	43				
	1651 - 1800	3,0		0,00	1,20	1,20	2,45
	900 - 1195	1,6					
14	1400 - 1650	2,3	44				
	1651 - 1800	3,0		0,00	1,20	1,20	2,45
	900 - 1650	1,6					
12	1651 - 1800	3,0	45	0,00	1,20	1,20	2,45
	900 - 1650	1,6					
10	1651 - 1800	3,0	46	0,40	1,60	1,85	3,30
	900 - 1595	1,6					
8	1700 - 1800	3,0	47	1,00	2,90	2,75	4,60
	770 - 1650	1,6					
7	1651 - 1800	3,0	48	1,40	3,50	3,45	5,55
	600 - 1650	1,6					
6	1651 - 1800	3,0	49	2,00	4,35	4,35	6,85
5	770 - 1195	1,6	50	2,75	5,65	5,60	8,60
4	600 - 990	1,6	51	3,95	7,55	7,55	11,25

7.2.2 OPMERKINGS

i) Rolle op wiegdraers word slegs vir Spoorvervoer aangebied en deurgaans met die oog in die breedte van 'n trok gelaai.

ii) Rolle sonder wiegdraers word slegs vir padvervoer aangebied en met die oog in die lengte rigting op 'n vragmotor gelaai.

iii) Indien wiegdraers vir padvervoer aangevra word moet klant spesifiseer in watter rigting die oog van die rol gelaai moet word.

iv) Die massa van die wiegdraers is nie by die gefaktureerde massa ingesluit nie.

v) Rolmassa:- Die rolmassa hierbo aangedui is onderworpe aan verandering.

vi) Rolmassa gespesifiseerd. "Slegs Blokgiet" of "Slegs Stringgiet" is onderworpe aan onderhandeling.

7.2.2 NOTES

i) Coils on cradles are normally for rail transport only and coils are loaded with the eye of the coil transversely positioned onto the truck.

ii) Coils without cradles are only for road transport and coils are loaded with the eye of the coil lengthwise onto the motortruck.

iii) If cradles for road transport are specified then customer must ensure that the direction of the eye of the coil is specified.

iv) The mass of cradles is not included in the invoiced mass.

v) Coil Mass:- The coil mass indicated above is subject to alteration.

vi) Coil mass specified "Ingot Cast only" or "Continuous Cast Only" is subject to negotiation.

YSKOR BEPERK ISCOR LIMITED

7. VERPAKKINGSEKSTRAS / PACKING EXTRAS

7.1 WARMGEWALSTE SMALBAND

Rolle is beskikbaar tot 'n maksimum massa (uitgedruk in kg/mm. van wydte) soos uiteengesit in die onderstaande tabel (klante moet vanaf die mees aanvaarbare rolgrootte vir hul behoeftes kies en dit op die bestelling spesifiseer).

7.1 HOT ROLLED SLIT STRIP

Coils are available to maximum mass (expressed in kg/mm of width) as set out in the undermentioned table. (Customers should select from the table and specify on the order the coil size most suited to their requirements).

7.1.1 WARMGEWALSTE SMALBAND / HOT ROLLED SLITSTRIP

ROLLE 25 – <600 mm WYD/WIDTH

MAKS. kg/mm WYDTE/ MAX. kg/mm WIDTH	KODE CODE	MINIMUM WYDTE/ MINIMUM WIDTH (mm)	STANDAARD VERPAKKING GEEN BESKERMING/ STANDARD PACKING NO PROTECTION		VOLBEDEKKING MET ROESWERENDE WATER DIGTE PAPIER EN SKROTPLAAT/FULL COVERAGE WITH RUST PREVENTATIVE WATERPROOF PAPER AND WASTER SHEET	
			SONDER WIEG-DRAER/WITH OUT CRADLE (KODE/CODE 08)	MET WIEG-DRAER/WITH CRADLE (KODE/CODE 09)	SONDER WIEG DRAER/WITH-OUT CRADLE KODE/CODE 28)	MET WIEG-DRAER/WITH CRADLE. (KODE/CODE 29)
10,00	20	150	1-40	2-70	2-65	3-85
5,00	21	75	4-85	7-30	7-25	9-70
3,33	22	40	8-25	11-90	11-85	15-50
2,50	23	25	18-50	25-80	25-85	33-00

7.1.2 OPMERKINGS / NOTES

i) Rolle op wiegdraers word normaalweg slegs vir spoorvervoer aangebied en deurgaans met die oog in die breedte van 'n trok gelaai.

i) Coils on cradles are normally for rail transport only, and coils are loaded with the eye of the coil transversely positioned onto the truck.

ii) Rolle sonder wiegdraers word slegs vir padvervoer aangebied en met die oog in die lengte rigting op 'n vragmotor gelaai.

ii) Coils without cradles are only for road transport and coils are loaded with the eye of the coil lengthwise positioned onto vehicle.

iii) Indien wiegdraers vir padvervoer aangevra word moet klant spesifiseer in watter rigting die oog van die rol gelaai moet word.

iii) If cradles for road transport are specified then customer must specify direction of eye of coil.

iv) Die massa van die wiegdraers is nie by die gefaktureerde massa ingesluit nie.

iv) The mass of cradles is not included in the invoiced mass.

v) Rolmassa gespesifiseerd "Slegs Blokgiet" of "Slegs Stringgiet" is onderworpe aan onderhandeling.

v) Coil mass specified "Ingot Cast Only" or "Continuous Cost Only" is subject to negotiation.

vi) Rolle word saamgebind in bondelgroottes om die werke praktyk te pas. Gespesifiseerde maksimum bondelmassa is onderhewig aan onderhandeling.

vi) Coils are strapped together to form bundles in sizes to suit works practice. Specified maximum bundle mass is subject to negotiation.

a) Vir gespesifiseerde 10kg/mm wydte, bondels van stroke, 150-600 mm wyd sal nie 10,89 ton oorskry.

a) For specified 10 kg/mm of width bundles of strip 150-600 mm wide will not exceed 10,89 tons

b) Om die maksimum bondelmassa van stroke 25 mm – <600 mm wyd te bereken sal die volgende formule geld – "Gespesifiseerde kg/mm wydte x 1200".

b) To calculate maximum bundle mass for strip 25 mm – <600 mm wide the following formula applie "Specified kg/mm width x 1200".

UNCONTROLLED

8. WALSRANDROLLE/MILL EDGE COILS

8A.1.1 WARMGEWALSTE ROLLE, WALSRAND (nie skoongebyt) (Verwys S9 par. 5.4.2)

8A.1.1 HOT ROLLED COILS, MILL EDGE (not pickled) (Refer S9 par. 5.4.2)

AFTREKKING/DEDUCTION
Kode/Code 2150

DIKTE/ THICKNESS (mm)	WYDTE/WIDTH (mm)			
	1025	1225	1525	Alle ander wydtes/ All other widths
3,5 - 4,0	R.c. 18-05	R.c. 18-30	R.c. 21-00	R.c. 14-65
2,8 - <3,5	18-05	21-85	21-00	14-65
1,6 - <2,8	18-05	21-85	-	14-65

8A.1.2 KWALITEITE / **8A.1.2 QUALITIES**

Kode/ Code		EKSTRA/ EXTRA
123	Handelskwaliteit (koolstof 0,15% maks.) Commercial Quality (carbon 0,15% max.) 4,5 mm dik/thick	R.c. 0-00
099	SAE 1010 (C 0,08 - 0,13% Mn 0,30 - 0,60%)	9-25
184	SAE 1012 (C 0,10 - 0,15% Mn 0,30 - 0,60%)	9-25
097	SAE 1017 (C 0,15 - 0,20% Mn 0,30 - 0,60%)	9-25
600	SAE 1023 (C 0,20 - 0,25% Mn 0,30 - 0,60%)	9-25
601	WQ1 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%)	18-00
602	WQ2 (Welding Quality C0-,08 - 0,13% Mn 0,30 - 0,60%)	18-00
603	WQ3 (Welding Quality C 0,10 - 0,15% Mn 0,40 - 0,60%)	18-00
604	WQ4 (Welding Quality C 0,15 - 0,20% Mn 0,50 - 0,70%)	18-00
605	WQ5 (Welding Quality C 0,20 - 0,25% Mn 0,70 - 0,90%)	18-00
643	BS 1449 GR. HR 4	7-50
054	BS 1449 Gr. KHR 1	56-00

8A.1.3 VERPAKKING (Rolle - Binnediameter 760 mm)
Standaardverpakking (Kode 08) RO-00
Standaardverpakking op Wiegstukke (Kode 09) R2-35

8A.1.3 PACKING (Coils - Inside diameter 760 mm)
Standard Packing (Code 08) RO-00
Standard Packing on Cradles (Code 09) R2-35

8A.1.4 WYDTE EN DIKTE EKSTRAS - SOOS PER S.P.E.
Groottebeperkings:
Dikte: 1,6 mm min. Nie-standaarddiktes - Min. hoeveelheid 40 ton/item.
Wydte: 900 mm min.
(Standaardtrappe 25 mm)

8A.1.4 WIDTH AND THICKNESS EXTRAS - AS PER S.P.E.
Size limitations:
Thickness: 1,6 mm min. Non-standard thicknesses - min. quantity 40 tons/item.
Width: 900 mm min.
(Standard increments 25 mm)

8A.1.5 WYDTE TOLERANSIE
Standaard : -0 + 31 mm..... RO-00
Beperkte toleransie: -0 + 20 mm R2-85

8A.1.5 WIDTH TOLERANCE
Standard : -0 + 31 mm RO-00
Restricted : -0 + 20 mm R2-85

YSKOR BEPERK ISCOR LIMITED

HOT ROLLED SHEETS
COILS/SLIT STRIP/LENGTHS

7. VERPAKKINGSEKSTRAS (VERVOLG)
PACKING EXTRAS (CONTINUED)

7.3 VERPAKKINGSEKSTRAS VIR FYNPLAAT – GESNYDE LENGTES
7.3 PACKING EXTRAS FOR SHEETS – CUT LENGTHS

VERPAKKINGS KODE/ PACKING CODE	BESKRYWING VAN TIPE VERPAKKING DESCRIPTION OF TYPE OF PACKING	STAPELMASSA/BUNDLE MASS			
		* 1,25 TON(S) KODE/CODE 03	* 2,50 TON(S) KODE/CODE 02	4,00 TON(S) KODE/CODE 10	5,00 TON(S) KODE/CODE 01
01	1. Standaardverpakking – Stapels word met staalhoepels vasgemaak/ Standard packing – Bundles tied by means of bands	R.C 13-00	R.C 5-60	R.C 2-35(a)	R.C 0-00(b)
05	2. Kant beskermende verpakking sonder papier en met lengteglyplanke/ Edge protective packing without paper and with lengthwise skids	22-70	10-35	5-00(a)	3-60(b)
06	3. Kant beskermende verpakking soos onder "2" aangedui met lengte en dwarsglyplanke/ Edge protective packing as under "2", plus length and crosswise skids.	20-50	8-65	4-45(a)	2-65(b)
25	4. Beskermende verpakking met hoekstutte, hoekplate, dekplate en roeswerende waterdigte papier op lengteglyplanke/ Edge protective packing with angle brackets, angle plates, cover sheets and rust preventive waterproof paper on lengthwise skids.	33-25	15-65	9-10(a)	6-85(b)
26	5. Beskermende verpakking soos onder "4" aangedui op lengte en dwarsglyplanke/ Edge protective packing as under "4" on length and crosswise skids.	30-85	14-35	7-80(a)	3-60(b)

* Nie van toepassing op wydtes > 1225 mm.

OPMERKING

1. Vir bestelde hoeveelhede wat tussen die massas van twee standaardgroottebondels lê, is die ekstra vir die bondelgrootte met die hoër ekstra van toepassing.
2. Die Korporasie behou hom die reg voor om bondels te lewer waarvan die massa minder is as die bestelde massa, of om bondels te lewer tot 10% swaarder as die bestelde massa.
3. Geliewe daarop te let dat by verpakkingsmetode 1, die materiaal blootgestel is aan beskadiging as gevolg van hantering en/of roes. Geen eise van klante sal dus ten opsigte van beskadigde materiaal wat volgens verpakkingsmetode 1 verpak is, oorweeg word nie.
4. Min. plaatgrootte:-
   (a) 0,9 m^2
   (b) 1,1 m^2

7.4 AFLEWERING – TROKSEILE

Die Korporasie bedek nie Pad/Spoorwegtrokke gedurende die vervoer van nie skoongebyte Warm gewalste materiaal nie. Indien klante dit noodsaaklik ag dat hul materiaal in trokke met trokseile bedek versend word, moet die bestelling ge-endoseer word met standaard opmerking nr. 2067 – aflewering (trokke moet met trokseile bedek word.)
Ekstra .....(2067).....R1-25 per ton
OPMERKING: Bostaande het nie betrekking op gebyte materiaal nie.

* Not applicable to widths > 1225 mm.

NOTES

1. For ordered quantities which lie between the masses of two standard size bundles, the extra for the bundle size bearing the higher extra applies.
2. The Corporation reserves the right to supply bundles which may have a mass less than the ordered bundle mass, or have a mass up to 10% more than the ordered bundle mass.
3. It should be noted with regard to packing 1, that material will be prone to damage due to handlings and/or rust. No claim from customers will therefore be considered for damaged material in respect of dispatches according to packing 1.
4. Min. sheet size:-
   (a) 0,9 m^2
   (b) 1,1 m^2

7.4 DELIVERY – TARPAULINS

The Corporation does not cover Road/Railway trucks during the transportation of unpickled Hot Rolled material. If customers consider it imperative that their material be dispatched in trucks covered with tarpaulins, the order must be endorsed with standard remark Nr. 2067 – delivery (trucks to be covered with Tarpaulins)
Extra .....(2067).....R1-25 per ton
NOTE: The above is not applicable to Pickled material.

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WARMGEWALSTE FYNPLAAT/ROLLE/SMALBAND/LENGTES — HOT ROLLED SHEETS/COILS/SLIT STRIP/LENGTHS

8. WALSRANDROLLE/MILL EDGE COILS

8B.1.1 WARMGEWALSTE ROLLE WALSRAND (skoongebyt) § 8B.1.1 . HOT ROLLED COILS, MILL EDGE (pickled) §

AFTREKKING/DEDUCTION

Kode/Code 3039 & 2053

DIKTE/ THICKNESS (mm)	WYDTE/WIDTH (mm)			
	1025	1225	1525	Alle ander wydtes/ All other widths
	R.c.	R.c.	R.c.	R.c.
3,5 - 4,0	10-75	11-15	13-90	7-40
2,8 - < 3,5	10-75	14-65	13-90	7-40
1,6 - < 2,8	10-75	14-65	-	7-40

§ Skoonbyt ekstras soos per bladsy P6 par. 5.1.4.

§ Pickling extras as per page P6 par. 5.1.4.

8B.1.2 KWALITEITE — **8B.1.2 QUALITIES**

Kode/ Code			EKSTRA/ EXTRA
123		Handelskwaliteit (koolstof 0,15% maks.) Commercial Quality (carbon 0,15% max.)	R.c. 0-00
099		SAE 1010 (C 0,08 - 0,13% Mn 0,30 - 0,60%)	9-25
184		SAE 1012 (C 0,10 - 0,15% Mn 0,30 - 0,60%)	9-25
097		SAE 1017 (C 0,15 - 0,20% Mn 0,30 - 0,60%)	9-25
600		SAE 1023 (C 0,20 - 0,25% Mn 0,30 - 0,60%)	9-25
601		WQ1 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%)	18-00
602		WQ2 (Welding Quality C0-,08 - 0,13% Mn 0,30 - 0,60%)	18-00
603		WQ3 (Welding Quality C 0,10 - 0,15% Mn 0,40 - 0,60%)	18-00
604		WQ4 (Welding Quality C 0,15 - 0,20% Mn 0,50 - 0,70%)	18-00
605		WQ5 (Welding Quality C 0,20 - 0,25% Mn 0,70 - 0,90%)	18-00
643		BS 1449 GR. HR 4	7-50
186		BS4360 Grade 43 A ≧3 mm dik/thick	7-50
261	*	BS 4360 Grade 43C ≦3 mm dik/thick	36-75
124		CORTEN A	173-25
503		CORTEN A-F	234-50
		Meganiese eienskappe en grootte beperkings soos per bl. P5 par 4.4/ Mechanical properties and size limitations as per page P5 par. 4.4.	
054		BS 1449 Part 1 Grade KHR1	56-00
512		CME 9 Simbool/Symbol 8 -	38-75
641		BS 1449 Grade HR 2	28-75
642		BS 1449 Grade HR 3	27-50
001	°	API 5L GRADE A	16-50
002	°	API 5L GRADE B	16-50

Nota/Note:
* Geen slagtoetse sal uitgevoer word nie (kode 2447)/ No impact tests wil be carried out (code 2447)
° Toleransie soos per SPE/Tolerances as per SPE

8B.1.3 VERPAKKING (Rolle - Binnediameter 610 mm)
Standaardverpakking (Kode 08) R0-00
Standaardverpakking op Wiegstukke (Kode 09) R2-35

8B.1.4 WYDTE EN DIKTE EKSTRAS - SOOS PER S.P.E.
Groottebeperkings:
Dikte: 1,6 mm min. Nie-standaarddiktes - Min. hoeveelheid 40 ton/item.
Wydte: 900 mm min.
(Standaardtrappe 25 mm)

8B.1.5 WYDTE TOLERANSIE
Standaard : -0 + 31 mm..... R0-00
Beperkte toleransie: -0 + 20 mm R2-85

8B.1.3 PACKING (Coils - Inside diameter 610 mm)
Standard Packing (Code 08) R0-00
Standard Packing on Cradles (Code 09) R2-35

8B.1.4 WIDTH AND THICKNESS EXTRAS - AS PER S.P.E.
Size limitations:
Thickness: 1,6 mm min. Non-standard thicknesses - min. quantity 40 tons/item.
Width: 900 mm min.
(Standard increments 25 mm)

8B.1.5 WIDTH TOLERANCE
Standard : -0 + 31 mm R0-00
Restricted : -0 + 20 mm R2-85

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YSKOR BEPERK ISCOR LIMITED

HOT ROLLED SHEETS
COILS/SLIT STRIP/LENGTHS

8. WALSRANDROLLE/MILL EDGE COILS

8A.2.1 WARMGEWALSTE ROLLE, WALSRAND (nie skoongebyt) (Verwys S9 par. 5.4.2)

8A.2.1 HOT ROLLED COILS, MILL EDGE (not pickled) (Refer S9 par. 5.4.2)

AFTREKKING/DEDUCTION
Kode/Code 2150

DIKTE/ THICKNESS (mm)	WYDTE/WIDTH (mm)			
	1025	1225	1525	Alle ander wydtes/ All other widths
3,5 - 4,0	R.c. 13-50	R.c. 13-75	R.c. 15-75	R.c. 11-00
2,8 - < 3,5	13-50	16-40	15-75	11-00
1,6 - < 2,8	13-50	16-40	-	11-00

8A.2.2 KWALITEITE

8A.2.2 QUALITIES

Kode/ Code		EKSTRA/ EXTRA
186	BS4360 Grade 43 A ≥ 3 mm dik/thick	7-50
261	* BS 4360 Grade 43C ≥ 3 mm dik/thick	36-75
124	CORTEN A	173-25
503	CORTEN A-F	234-50
	Meganiese eienskappe en grootte beperkings soos per bl. P5 par 4.4/ Mechanical properties and size limitations as per page P5 par. 4.4.	
512	CME 9 Simbool/Symbol 8 -	38-75
641	BS 1449 Grade HR 2	28-75
642	BS 1449 Grade HR 3	27-50
001	° API 5L GRADE A	16-50
002	° API 5L GRADE B	16-50
	Nota/Note:	
	* Geen slagtoetse sal uitgevoer word nie (kode 2447)/ No impact tests will be carried out (code 2447)	
	° Toleransie soos per SPE/Tolerances as per SPE	

8A.2.3 VERPAKKING (Rolle - Binnediameter 760 mm)
Standaardverpakking (Kode 08) R0-00
Standaardverpakking op Wiegstu'
(Kode 09) R2-35

8A.2.4 WYDTE EN DIKTE EKSTRAS - SOOS PER S.P.E.
Grootteheperkings:
Dikte: 1,6 mm min. Nie-standaarddiktes - Min. hoeveelheid 40 ton/item.
Wydte: 900 mm min.
(Standaardtrappe 25 mm)

8A.2.5 WYDTE TOLERANSIE
Standaard : -0 + 31 mm..... R0-00
Beperkte toleransie: -0 + 20 mm R2-85

8A.2.3 PACKING (Coils - Inside diameter 760 mm)
Standard Packing (Code 08) R0-00
Standard Packing on Cradles
(Code 09) R2-35

8A.2.4 WIDTH AND THICKNESS EXTRAS - AS PER S.P.E.
Size limitations:
Thickness: 1,6 mm min. Non-standard thicknesses - min. quantity 40 tons/item.
Width: 900 mm min.
(Standard increments 25 mm)

8A.2.5 WIDTH TOLERANCE
Standard : -0 + 31 mm R0-00
Restricted : -0 + 20 mm R2-85

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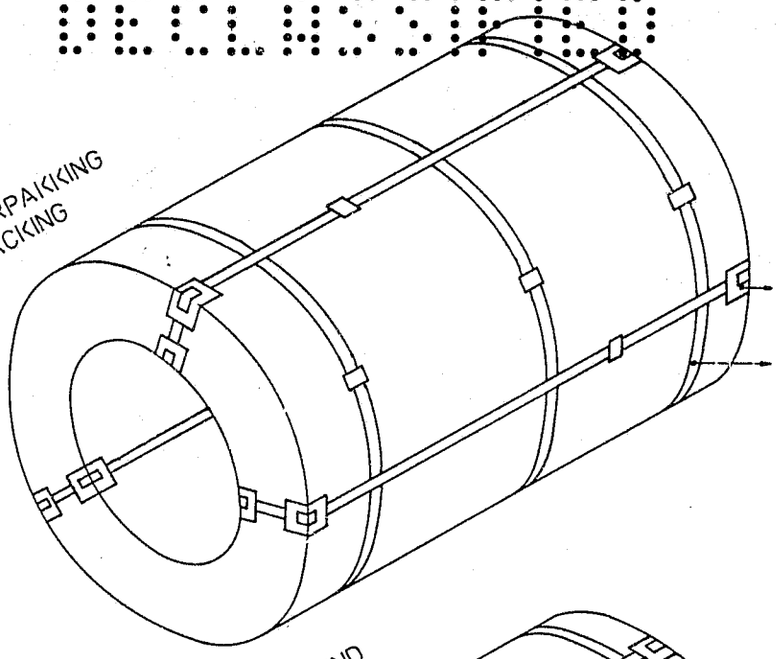
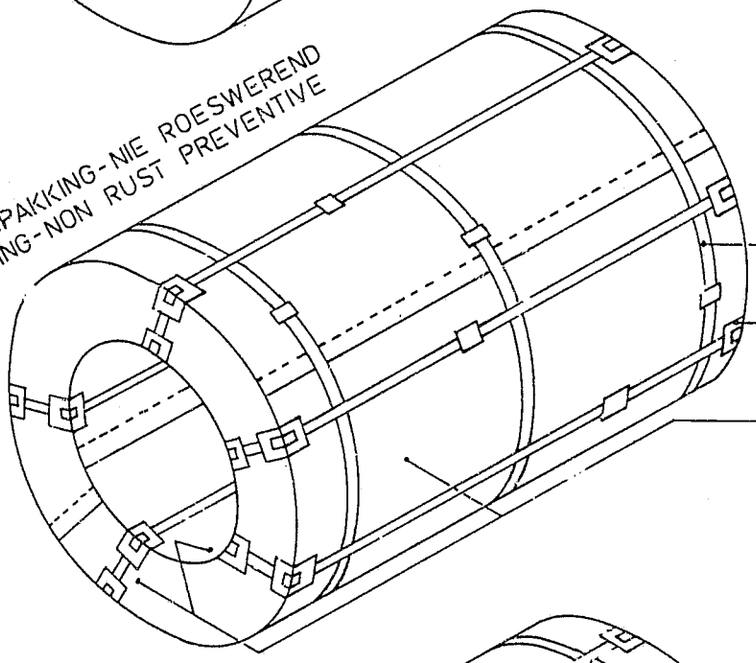
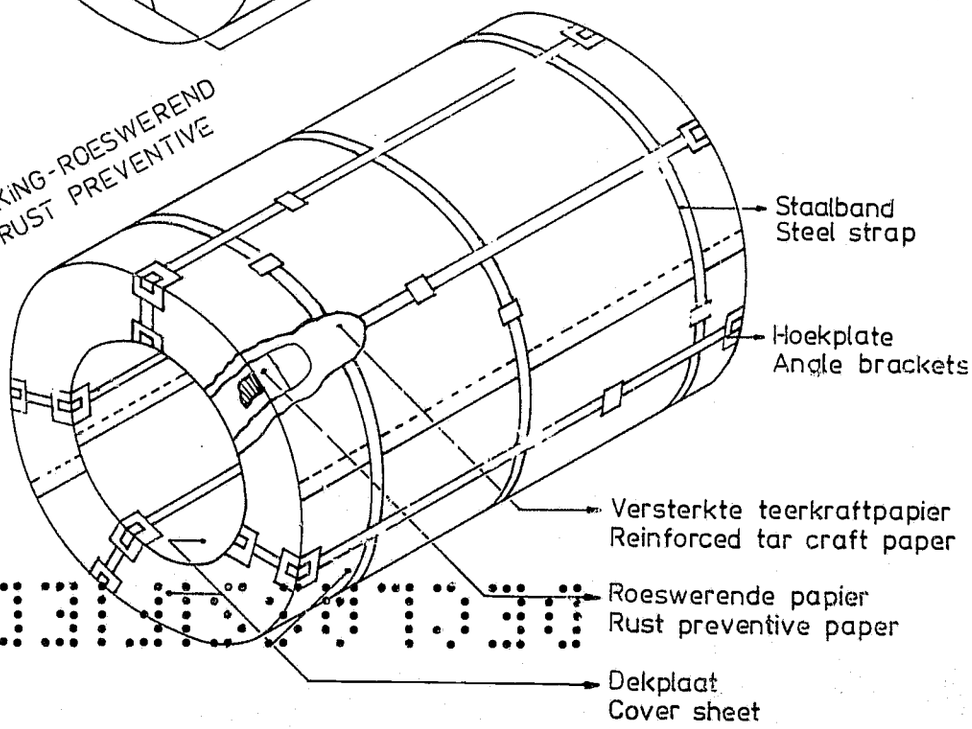
STANDAARDVERPAKKING
STANDARD PACKING



BESKERMENDE VERPAKKING-NIE ROESWEREND
PROTECTIVE PACKING-NON RUST PREVENTIVE



BESKERMENDE VERPAKKING-ROESWEREND
PROTECTIVE PACKING-RUST PREVENTIVE



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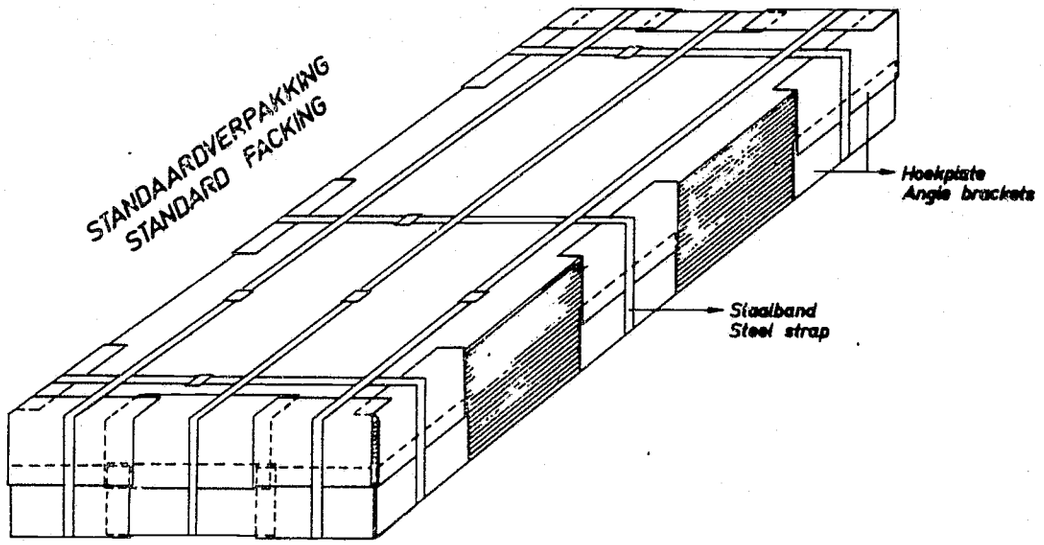

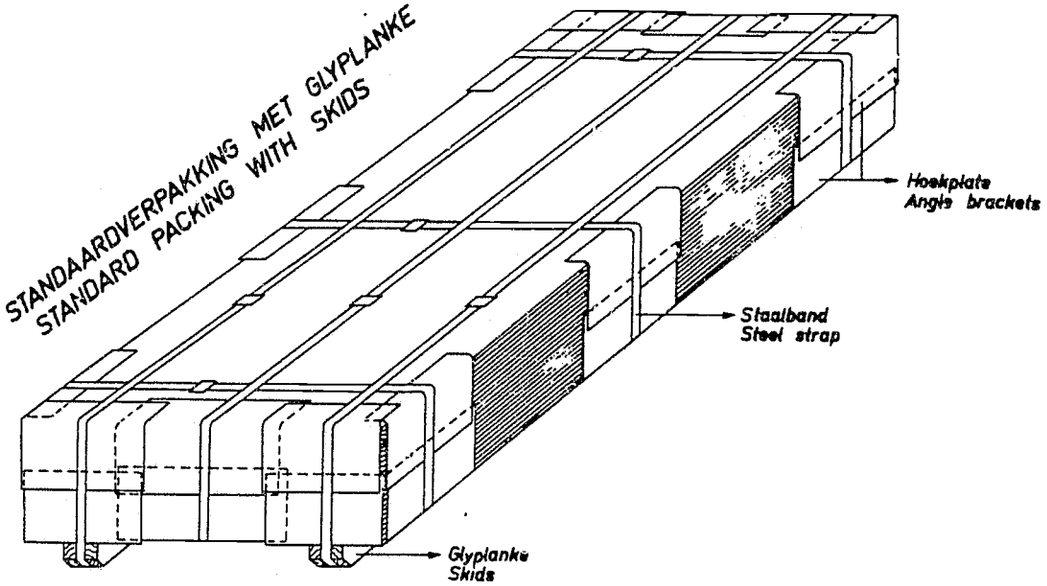

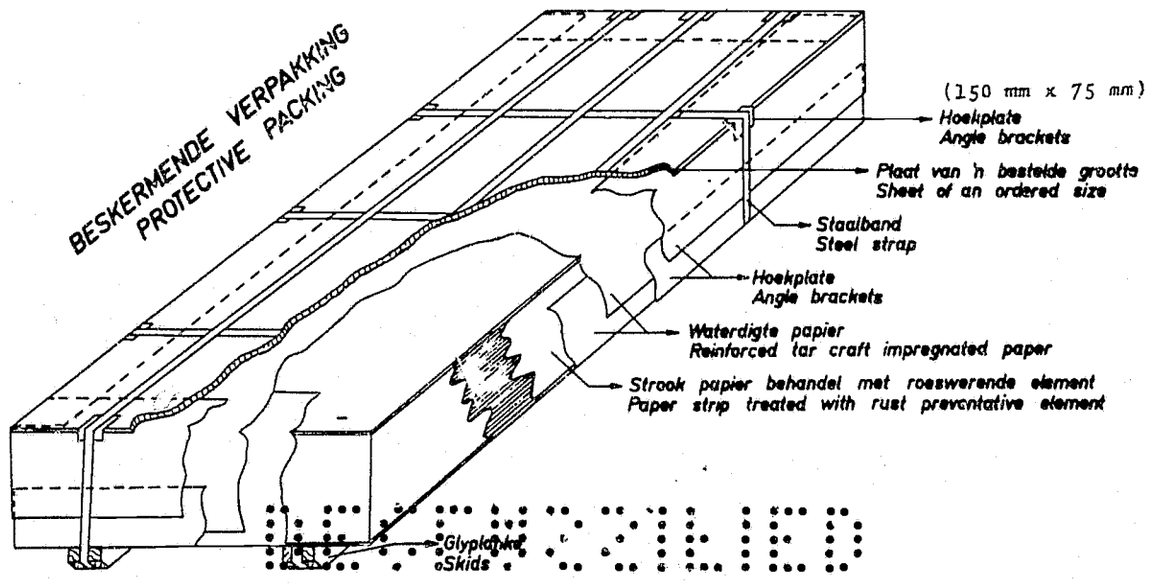

WARMGEWALSTE FYNPLAAT
ROLLE/SMALBAND/LENGTES

HOT ROLLED SHEETS
COILS/SLIT STRIP/LENGTHS

B. STANDAARDVERVAARDIGINGSPRAKTYK
STANDARD MANUFACTURING PRACTICE

1. OMVANG

Warmgewalste fynplaat en rolle bestaan uit die groep platprodukte wat verkry word deur verhitte staal in 'n deurlopende tipe walswerk te wals. Warmgewalste fynplaat is geskik vir baie doeleindes waar die teenwoordigheid van oksied of skaal en normale oppervlakgebreke wat na die verwydering van oksied of skaal blootgestel word, nie onaanvaarbaar is nie. Dit is nie geskik vir doeleindes waar oppervlakafwerking van primêre belang is nie.

Warmgewalste Smalband bestaan uit die groep koolstofstaalband wat gestrooksny is uit warmgewalste rolle soos hierbo beskryf.
Die beskikbare groottes is beperk tot dié aangedui in die lengte-, wydte- en diktetabelle.

1. SCOPE

Hot Rolled Sheets and coils comprise that group of flat products obtained by rolling heated steel in a continuous type mill. Hot Rolled sheet is suitable for many applications where the presence of oxide or scale or normal surface imperfections disclosed after removal of oxide or scale are not objectionable. It is not suitable for applications where surface finish is of prime importance.

Hot Rolled Slit Strip comprises that group of carbon strip which has been slit from hot rolled coils described above.
The available sizes are limited to those shown in the length, width and thickness tables.

2. KWALITEIT

2.1 HANDELSKWALITEIT

Wanneer Handelskwaliteit warmgewalste Smalband/Fynplaat gespesifiseer word, is die volgende analise en toetse van toepassing:

2. QUALITY

2.1 COMMERCIAL QUALITY

When Commercial Quality Hot Rolled Slit Strip/Sheet is specified, the following analysis and tests, are applicable:-

2.1.1 CHEMIESE ANALISE
(Gietpotanalise)

(a) Handelskwaliteit Warmgewalste Smalband/Fynplaat onder 4,5 mm dik word normaalweg gelewer in staal met 'n laekoolstofinhoud van 0,15% maks.

(b) Handelskwaliteit Warmgewalste Smalband/rolle 4,5 mm dik en dikker word normaalweg gelewer in staal met 'n koolstofinhoud van 0,25% maks.

(c) Wanneer verlang is Handelskwaliteit Warmgewalste Smalband/Fynplaat beskikbaar, in 5-puntkoolstofreekse reekse tot 0,25% maks. waarvoor ekstras gevra word.
(Verwys par. 4.1, bladsy P4.)
OPMERKING:
Handelskwaliteit Warmgewalste Smalband/Fynplaat word nie vervaardig om aan treksterktevereistes te voldoen nie.

(d) In elk van bogenoemde gevalle sal 'n maksimum inhoud van 0,035% Fosfor en 0,040% Swael van toepassing wees.

2.1.1 CHEMICAL ANALYSIS
(Ladle Analysis)

(a) Commercial Quality Hot Rolled Slit Strip/Sheet under 4,5 mm thick is normally supplied in a low carbon steel of 0,15% max.

(b) Commercial Quality Hot Rolled Slit Strip/coils 4,5 thick and thicker are normally supplied in steel with a carbon content of 0,25% max.

(c) When required, Commercial Quality Hot Rolled Slit Strip/Sheet are available in 5-point carbon ranges up to 0,25% max. for which extras are charged.
(Refer par. 4.1 page P.4.)
NOTE:
Commercial Quality Hot Rolled Slit Strip/Sheet is not produced to conform to tensile requirements.

(d) In each of the above cases a maximum content of 0,035% Phoshorus and 0,040% Sulphur will apply.

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WARMGEWALSTE FYNPLAAT/ROLLE/SMALBAND/LENGTES

3.2 BINNEDIAMETER VAN ROLLE

(a) Gekantsnyde rolle en smalband in rolle (nie skoongebyt)

KODE/ CODE	GESPESIFISEERDE DIKTE (MM)/ SPECIFIED THICKNESS (MM)	DIAMETER BINNE/ DIAMETER INSIDE (MM)	
		GESPESIFISEERDE WYDTES/ SPECIFIED WIDTHS (MM)	
		⩽ 1225	⩾ 1225
2591	⩽ 4	*610 of/or 760	*610 of/or 760

* Volgens Werkekeuse

(b) Rolle (Skoongebyt)

KODE/CODE	DIA BINNE/DIA INSIDE (MM)
2591	610

(c) Walsrand rolle

KODE/CODE	DIA BINNE/DIA INSIDE (MM)
2591	760

HOT ROLLED SHEETS COILS/SLIT STRIP/LENGTHS

3.2 INSIDE DIAMETER OF COILS

(a) Side trimmed coils and slit strip in coils (not pickled)

* At Works option

(b) Coils (Pickled)

(c) Mill Edge Coils

4. TOLERANSIES TOLERANCES

4.1 MASSA

(a) Warmgewalste Fynplaat/Smalband word gewals in millimeterdiktes.

(b) Die normale digtheid van staal vir 1 vierkante meter van 1 millimeter dik = 7,85 kg. Warmgewalste Fynplaat/Smalband word verkoop teen 'n prys per ton. Om massa vanaf dikte te bereken moet kroon - en oor toleransies op wydte en lengte in berekening gebring word dan is die basis van berekening: 1 vierkante meter, 1 mm dik het 'n massa van 8,039 kg.

4.2 MASSATOLERANSIE (Gesnyde Lengtes)

Massatoleransie vir fynplaat van een dikte en grootte in die volgende tabel is van toepassing op versendings of gedeelte daarvan na een bestemming. (In een of meer versendings of gedeelte daarvan is die toleransie vir daardie spesifieke massa van toepassing):-

MASSA (TON) MASS (TONS)	MASSATOLERANSIES/MASS TOLERANCES % BO (+) EN ONDER (-) OVER (+) AND UNDER (-)
1 - 2,5	8
> 2,5 - 4,5	7
> 4,5 - 13,5	6
>13,5 - 22,5	5,5
>22,5 -	5

Hierdie tabel is nie van toepassing op materiaal in rolvorm nie.

4.1 MASS

(a) Hot Rolled Sheet/Slit Strip is rolled to millimeter thicknesses.

(b) The normal density of steel 1 sq metre of sheet 1 mm thick = 7,85 kg. Hot Rolled Sheet/Slit Strip is sold on a price per ton basis. To convert mass from thickness taking into account crown and over tolerance on width and length the following formula applies: 1 square meter of sheet 1 mm thick = 8,039 kg.

4.2 MASS TOLERANCE (Cut Lengths)

Mass tolerances for sheets of one thickness and size in the following table apply to consignments or portion of consignments to one destination. (In one or more consignments or any portion of one consignment the tolerance for that particular mass applies):

This table does not apply to material in coil form.

UNCONTROLLED

2. KWALITEIT (VERVOLG)
QUALITY (CONTINUED)

2.1.2 BUIGTOETSE

(a) Vir diktes onder 4,5 mm
Vir enige koolstofreeks wat nie die maksimum van 0,15% oorskry nie, behoort die toetsmonster by kamertemperatuur in enige rigting plat op sigself gebuig te kan word.
Vir enige koolstofreeks binne 0,15 tot 0,25%, behoort die toetsmonster by kamertemperatuur deur 'n boog van 180 grade in enige rigting om 'n dikte gelykstaande aan drie maal dié van die toetsmonster gebuig te kan word.

OPMERKINGS:

(a) Toetsstukke is minstens 38 mm wyd. Die rukant of snyrand deur die snyproses veroorsaak, kan verwyder word deur middel van vyl, slyp of masjienering.

(b) Daar behoort geen geredelike sigbare krake op enige gebuigde oppervlak te wees nie. Krake op die gesnyde kante van die monster en growwe tekstuur word egter buite rekening gelaat.

2.1.2 BEND TESTS

(a) For thicknesses under 4,5 mm
For any carbon range the maximum of which does not exceed 0,15%, a test specimen should stand being bent flat on itself in any direction at room temperature.
For any carbon range within 0,15 to 0,25%, a test specimen should stand being bent at room temperature through 180 degrees in any direction around a thickness equal to three times that of the specimen.

NOTES:

(a) Test pieces are not less than 38 mm wide. The rough edge or arris caused by cutting or shearing may be removed by filing, grinding or machining.

(b) There should be no readily visible cracks along any bend, but cracks at the sheared edges of the specimen and coarse grain are disregarded.

3. GROOTTEREEKS / RANGE OF SIZES

3.1 FYNPLAAT/SHEETS

STANDAARD DIKTES (mm) STANDARD THICKNESS (mm)	WYDTES/WIDTHS (mm)		LENGTE (m) LENGTH (m)
	ROLLE/ COILS	GESNYDE LENGTES/ CUT LENGTHS	
4,0 3,5 3,0	600 - 1 800	600 tot/to 1 800	*1,0 tot/to 6,0
2,8	600 - 1 800	600 - 1 800	
2,5	600 - 1 500	600 - 1 500	
2,2 2,0	600 - 1 300	600 - 1 300	
1,8	600 - 1 225	600 - 1 225	
1,6			1,0 tot/to 3,65

3.1 SMALBAND/SLIT STRIP

LAE-KOOLSTOFSTAAL d.i. KOOLSTOF OP TOT EN INSLUITENDE 0,25%/ LOW CARBON STEELS i.e. CARBON UP TO AND INCLUDING 0,25%	HOë-KOOLSTOFSTAAL d.i. KOOLSTOF OOR 0,25% EN HOë TREKSTERKTESTAAL bv. CORTEN/ HIGH CARBON STEELS i.e. CARBON OVER 0,25% AND HIGH TENSILE STEEL e.g. CORTEN
WYDTES/ WIDTHS	WYDTES/ WIDTHS
75 - < 600	150 - < 600
30 - < 600	100 - 500
25 - < 600	90 - 450
	90 - 375

* OPMERKING:
Diktes 2,2 - 4,0 mm > 1 225 mm wyd - min. lengte 1,8 m

* NOTE:
For thicknesses 2,2 - 4,0 mm > 1 225 mm wide - min length 1,8 m

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4. TOLERANSIES (VERVOLG)
TOLERANCES (CONTINUED)

4.5 WYDTETOLERANSIES SMALBAND

Die volgende afwykings van gespesifiseerde wydtes word toegelaat:-
(As gevolg van die hoek wat ontwikkel op die gesnyde kante, word die wydte op die wydste gedeelte gemeet.)

4.5 WIDTH TOLERANCES SLIT STRIP

The following variations on specified widths are allowed:-
(Owing to the angle, developing on the sheared edges, the width is measured at the widest portion.)

DIKTE/ THICKNESS (mm)	WYDTES (mm) / WIDTHS (mm)				
	> *25 - 150	>150 - 225	> 225 - 300	>300 - 500	> 500 - 600
	AFWYKINGS OOR OF ONDER (mm) / VARIATIONS OVER OR UNDER (mm)				
- 1,6	0,20	0,20	0,30	0,80	1,00
>1,6 - 2,2	0,20	0,30	0,40	0,80	1,00
>2,2 - 4,0	0,40	0,40	0,50	0,80	1,00

OPMERKING:
* Vir 25 mm wyd is die toleransie -0+1 mm.

NOTE:
* For 25 mm width the tolerance will be -0+1 mm.

4.6 KROMMINGTOLERANSIE

Kromming is die grootste afwyking tussen 'n sykant en 'n reguit lyn, gemeet met 'n rei tussen die uitholkant en 'n reguit lyn.

4.6.1 KROMMINGTOLERANSIE (Rolle)
25 mm in enige 6 000 mm.

4.6.2 KROMMINGTOLERANSIE (Gesnyde lengtes)
4,0 mm dik
0,4% van lengte

4.6.3 KROMMINGTOLERANSIE (Smalband)

4.6 CAMBER TOLERANCE

Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with straight edge.

4.6.1 CAMBER TOLERANCE (Coils)
25 mm in any 6 000 mm.

4.6.2 CAMBER TOLERANCE (Cut lengths)
4,0 mm thick
0,4% of length

4.6.3 CAMBER TOLERANCE (Slit Strip)

WYDTE/ WIDTH (mm)	TOLERANSIE/ TOLERANCE
⩽40 mm	13 mm in enige 2 500 mm
⩽40 mm	13 mm in any 2 500 mm
>40 mm	6,5 mm in enige 2 500 mm
>40 mm	6,5 mm in any 2 500 mm

4.3 DIKTETOLLERANSIES

4.3.1 ROLLE 1,6 – 4,0mm EN GESNYDE LENGTES 1,6 – 4,0 mm

WYDTEREEKS/ RANGE OF WIDTHS (mm)	GESPESIFISEERDE DIKTE/SPECIFIED THICKNESS (MM)		
	*DIKTE TOLERANSIES IN mm BO (+) EN ONDER (–) *THICKNESS TOLERANCES IN mm OVER (+) AND UNDER (–)		
	> 2,5 – 4,0	> 1,8 – 2,5	1,6 – 1,8
600 – 800	0,18	0,18	0,15
> 800 – 1 000	0,18	0,18	0,15
> 1 000 – 1 225	0,20	0,18	0,15
> 1 225 – 1 525	0,20	0,18	–
> 1 525 – 1 800	0,20	–	–

* Dikte word gemeet by enige punt op die plaat minstens 10 mm van die kant af.

4.3.2 SMALBAND

GESPESIFISEERDE DIKTE IN mm/SPECIFIED THICKNESS IN mm		
> 2,5 – 4,0	> 1,8 – 2,5	1,6 – 1,8
(a) DIKTETOLERANSIES (mm) OOR (+) ONDER (–)/ THICKNESS TOLERANCES (mm) OVER (+) UNDER (–)		
0,20	0,18	0,15

(a) Dikte word gemeet by enige punt op die smalband minstens 10 mm van die kant.

4.4 WYDTE- EN LENGTETOLERANSIES

4.4.1 ROLLE
GESNYDE LENGTES
(Nie Haaksgesny nie)

WYDTE/WIDTH		LENGTE/LENGTH	
GESPESIFISEERDE WYDTE SPECIFIED WIDTH (mm)	TOLERANSIE BO GESPESIFISEERDE WYDTE TOLERANCE OVER SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE SPECIFIED LENGTH (mm)	TOLERANSIE BO GESPESIFISEERDE LENGTE TOLERANCE OVER SPECIFIED LENGTH (mm)
600 – 750	4	≤ 1 500	13
> 750 – 1 225	5	> 1 500 – 3 000	19
> 1 225 – 1 525	6	> 3 000 – 4 000	25
> 1 525 – 1 800	8	> 4 000 – 4 900	32
		> 4 900 – 6 000	

Wydte en lengte toleransie niks onder nie.

4.3 THICKNESS TOLERANCES

4.3.1 COILS 1,6 – 4,0mm AND CUT LENGTHS 1,6 – 4,0 mm

* Thickness is measured at any point on the sheets not less than 10 mm from the edge.

4.3.2 SLIT STRIP

(a) Thickness is measured at any point on the strip not less than 10 mm from the edge.

4.4 WIDTH AND LENGTH TOLERANCES

4.4.1 COILS
CUT LENGTHS
(Not Resquared)

Width and length tolerance nothing under.

UNCONTROLLED

WARMGEWALSTE FYNPLAAT ROLLE/SMALBAND/LENGTES

HOT ROLLED COILS/SLIT STRIP/LENGTHS

CLASSIFIED

A. TOLERANSIES (VERVOLG)
TOLERANCES (CONTINUED)

4.9 PLATHEIDTOLERANSIES (Vervolg)
4.9.2 GESPESIFISEER VOLGENS PLATRIG STANDAARD VAN PLATHEID
Gesnyde lengtes

4.9 FLATNESS TOLERANCES (Continued)
4.9.2 SPECIFIED LEVELLED STANDARD OF FLATNESS
Cut lengths

DIE MAKSIMUM AFWYKING VAN 'N HORISONTALE PLAT OPPERVLAK
THE MAXIMUM DEVIATION FROM A HORIZONTAL FLAT SURFACE

GESPESIFISEERDE DIKTE SPECIFIED THICKNESS mm	GESPESIFISEERDE WYDTE SPECIFIED WIDTH mm	GESPESIFISEERDE LENGTES SPECIFIED LENGTHS mm	PLATHEID-TOLERANSIES FLATNESS TOLERANCES mm
1,6 - 4,0	600 - 1 225	⩽ 2 500 > 2 500 - 4 300 (Maks/Max.)	3 6

NOTA: Verwys Bladsy P7 Par. 5.1.5

4.10 ANDER KWALITEITE AS HANDELSKWALITEIT
Warmgewalste fynplaat word volgens A.S.T.M.-, BS- en ander spesifikasies geproduseer.
Tensy anders ooreengekom, word ander kwaliteite as Handelskwaliteit in ooreenstemming met die vereistes van die betrokke spesifikasie gelewer.

NOTE: Refer to Page P7 Par. 5.1.5

4.10 QUALITIES OTHER THAN COMMERCIAL QUALITY
Hot Rolled Sheets are produced to A.S.T.M.-, BS- and other specifications.

Unless otherwise agreed upon, qualities other than Commercial quality are supplied in accordance with the requirements of the relevant specification.

DECLASSIFIED

4. TOLERANSIES (VERVOLG)
TOLERANCES (CONTINUED)

4.7 NIE-HAAKSTOLERANSIES (Gesnyde Lengtes)
(Nie haaksgesny nie)
Nie-reghoekig is die grootste afwyking tussen 'n kant en 'n reguit lyn wat reghoekig loop vanuit een hoek. Dit kan ook verkry word deur die verskil in oorhoeksmate te meet. Die nie-reghoekige afwyking is die helfte van die verskil. Die toleransie vir fynplaat van alle diktes en alle groottes is 1,0% van die wydte.

4.7 OUT-OF-SQUARE TOLERANCES (Cut lengths)
(Not resquared)
Out-of-square is the greatest deviation of an edge from a straight line at right angles to a side and touching one corner. It is also obtained by measuring the difference between the diagonals of the sheet. The out-of-square deviation is one half of the difference. The tolerance for sheets of all thicknesses and all sizes is 1,0% of the width.

4.8 TOLERANSIES VIR HAAKSGESNYDE FYNPLAAT
Die afsonderlike toleransies vir oorwydte, oor-lengte, kromming of niereghoekig is soos volg:-

4.8 RESQUARED SHEET TOLERANCES
The individual tolerances for overwidth, overlength, camber or out-of-square are as follows:

MAKS. LENGTE/ MAX. LENGTH 3 650 mm	MAKS. WYDTE/ MAX. WIDTH 1 850 mm
⩽ 3 000	- 0 + 1,5
> 3 000	- 0 + 3,0

4.9 PLATHEIDSTOLERANSIES
4.9.1 PLATRIG NIE GESPESIFISEER NIE
Gesnyde lengtes

4.9 FLATNESS TOLERANCES
4.9.1 LEVELLING NOT SPECIFIED
Cut lengths

DIE MAKSIMUM AFWYKING VAN 'N HORISONTALE PLAT OPPERVLAK THE MAXIMUM DEVIATION FROM A HORIZONTAL FLAT SURFACE		
GESPESIFISEERDE DIKTE SPECIFIED THICKNESS (mm)	GESPESIFISEERDE WYDTE SPECIFIED WIDTH (mm)	PLATHEIDTOLERANSIE FLATNESS TOLERANCE (mm)
1,6 - < 4,5	600 - 1 525	13
	1 526 - 1 800	19

OPMERKING:
(i) Gedurende die verwerking van gesnyde lengtes word die fynplaat platgemaak deur kragtige rolrigters wat deel uitmaak van die skêrbaan. Tensy die klant oor soortgelyke rolrigtergerieue beskik moet hy nie verwag om dieselfde platheidtoleransies te behaal indien hy self lengtes van rolle afsny nie.
(ii) Platheid en haspeldwarsknakke
(a) Teneinde platheid en vrywaring van haspeldwarsknakke te verseker word klante aangeraai om hul materiaal getemperwals te bestel (Verwys P.7 para. 5.1.7).
(b) Dit is standaard praktyk van die Korporasie om warmgewalste materiaal waarvan die wydte tot dikte verhouding 600 tot 1 te oorskry te temperwals. Bestellings vir die materiaal moet geëndosseer word met kode 2073 teenoor die toepaslike prysekstra. (Verwys P7 para 5.1.7) Slegs in uitsonderlike gevalle is die Korporasie bereid om materiaal te voorsien met 'n wydte tot dikte verhouding groter as 600 tot 1 "nie getemperwals" onder die volgende omstandighede. Bestellings moet geëndoseer word - Temperwals nie nodig (kode 2743) en platheid nie gewaarborg. (kode 3693)

NOTE:
(i) During the processing of cut lengths, the sheets are flattened by powerful levellers which form part of the shearing line. Unless the customer has similar levelling facilities, he should not expect that sheets which he shears from coils will meet our flatness tolerances.
(ii) Flatness and coil breaks
(a) In order to ensure flatness and freedom from coil breaks, customers are advised to order their material Temper Rolled (Refer P.7 para. 5.1.7).
(b) It is the normal practice of the Corporation to temper roll all hot rolled material with a width to thickness ratio in excess of 600 to 1. Orders for such material should be endorsed with the code 2073 at the applicable price extras. (Refer P7 para 5.1.7).
Exceptionally the Corporation is prepared to supply material with a width to thickness ratio in excess of 600 to 1 "not temper rolled" under the following conditions - Orders must be endorsed "Temper rolling not necessary (code 2743) and flatness not guaranteed. (code 3693)

5.2.2 MERKING

(a) Gesnyde Lengtes
Die boonste plaat van elke bondel word gemerk met die graad- of kwaliteitsimbool, dikte, lengte, wydte, en benaderde getal plate in die bondel.

(b) Rolle
Die kwaliteit, wydte en dikte word op elke rol, aangebring.

(c) Smalband
Elke bondel rolle word gemerk met die kwaliteit, wydte en dikte.
Opmerking: Wanneer 'n analisesertifikaat of 'n analise- en toetssertifikaat vereis word, sal die "gietnommer" op die bondel/rol aangetoon word.

5.3 MASSA VAN ROLLE
Bestellings vir rolle met 'n gespesifiseerde presiese massa word nie aanvaar nie.
Rolle kan bestel word tot 'n gespesifiseerde maksimum massa volgens bladsye P8 en P9.
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word sal versending van die bestelling soos volg geskied:

(a) Minstens 80% in volmassarolle.
(b) Hoogstens 20% in ligmassarolle.

"Volmassarolle"
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, word rolle met 'n massa van minstens 65% van daardie maksimum massa gelewer.

"Ligmassarolle"
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, is "Ligmassarolle" rolle met 'n massa van minder as "volmassarolle" maar met minstens 25% van die maksimum massa hetsy gespesifiseer of omgereken.

5.4.1 ROLLE
Wanneer rolle bestel word, kan daar verwag word dat dit meer defekte (sweislasse, gate ensovoorts) en oppervlakgebreke as gesnyde lengtes sal hê aangesien dit nie moontlik is om gedeeltes wat gebreke bevat, af te keur of te sorteer soos in die geval van gesnyde lengtes.
'n Mate van teleskopering kan voorkom maar hierdie teleskopieteit mag nie in die geval van enige enkele rol 30 mm oorskry nie.

5.4.2 WALSRANDROLLE

(a) Walsrandrolle word onafgewerk voorsien
Onafgewerk dui aan dat rolle direk vanaf die Warmbandwals voorsien word en normaalweg nie op 'n bykomstige eenheid vir inspeksie, monsterneming of rol grootte vermindering doeleindes herstel word nie.

(b) Swaelstertsnysels
Onafgewerkte Walsrandrolle word in die "Soos gewals" toestand voorsien, ongeknipte swaelstertsnysels sal tot 'n minimum beperk word.

(c) Rolpunte
Gedeeltes van die voor- en agterpunte van Walsrandrolle mag buite die dikte toleransie wees maar sal nie meer as 7 meters in totaal per rol wees nie op voorwaarde dat normale dikte toleransie van toepassing is (d.i. beperkte dikte toleransies nie gespesifiseer is nie).

5.4.3 HANDELS/TREKKWALITEIT
Warmgewalste Fynplaat word vervaardig om sover moontlik aan die vereistes van die klant se eindgebruik te voldoen. Klante word derhalwe versoek om ons te raadpleeg met die oog op die verkryging van geskikste materiaal vir hul vervaardigingsproses.

5.2.2 MARKING

(a) Cut Lengths
The top sheet of each bundle will be marked to indicate grade or quality symbol, thickness, length, width and approximate number of sheets.

(b) Coils
Each coil is marked with the quality width and thickness.

(c) Slit Strip
Each bundle of coils is marked with the quality, width and thickness.
Note: When an analysis certificate or analysis and test certificate is required, the "Cast number" will be indicated on the bundle/coil.

5.3 MASS OF COILS
Orders for coils to a specified exact mass are not accepted. Coils may be ordered with a specified maximum mass in accordance with pages P8 and P9.
When coils are ordered to a specified maximum mass, the order is dispatched as follows:

(a) Not less than 80% in full mass coils
(b) Not more than 20% in light mass coils.

"Full Mass Coils"
When coils to specified maximum mass are ordered, then coils are supplied with a mass of not less than 65% of that maximum mass.

"Light Mass Coils"
When coils are ordered to a specified maximum mass, then "Light Mass Coils" are coils with a mass of less than "Full Mass Coils" but not less than 25% of the maximum mass specified or converted.

5.4.1 COILS
When coils are ordered, it must be expected that they will contain more defects (welds, holes etc.) and surface imperfections than cut lengths as it is not possible to reject and sort portions containing imperfections as is the case with cut lengths.

Some telescoping of coils may occur but this telescopicity will not be more than 30 mm on any one coil.

5.4.2 MILL EDGE COILS

(a) Mill edge coils are supplied mill run
Mill run implies that coils are supplied straight off the Hot Strip Mill and are not normally rewound on a secondary unit for inspection, sampling or coil size reduction purposes.

(b) Fish Tails
Mill run mill edge coils are supplied as rolled, uncropped fish tails will, however be kept to a minimum.

(c) Coil ends
Portion of front and tail end of mill edge coils may be out of thickness tolerance but this will not be more than 7 metres in total per coil provided normal thickness tolerances apply (i.e. restrictive thickness tolerances are not specified).

5.4.3 COMMERCIAL/DRAWING QUALITY
Hot Rolled Sheets are produced to suit customers' end use as far as possible. Customers are, therefore requested to consult us, with a view to obtain material best suited for their manufacturing process.

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5. ALGEMEEN / GENERAL

5.1 OORMAAT OF ONDERMAAT

(a) Vir elke item van 'n bestelling behou ons ons die reg voor om materiaal te voorsien binne die toleransies soos hieronder aangedui:-

MASSA VAN BESTELDE ITEMS OF DIE BEREKENDE MASSA VAN DIE AANTAL FYNPLAAT BESTEL MASS OF ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF SHEETS ORDERED TON(S)	OORMAAT (+) OVERAGE (+) TON(S)	ONDERMAAT (-) UNDERAGE (-) TON(S)
2 -< 5	+ 1	- 1
5 -< 10	+ 2	- 3
10 -< 20	+ 3	- 4
20 -< 40	+ 4	- 5
40 -<100	+ 4	- 6
≥100	+ 6	- 10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Vir beperking op bogenoemde toleransies verwys bladsy P8 par. 6.

5.2.1 SAAMBIND IN BONDELS

(a) Gesnyde Lengtes

Fynplaat word behoorlik deur middel van bande in bondels van die volgende groottes gebind:-

(i) Vir wydtes≤1 225 mm
Ongeveer 1,25 ton
Ongeveer 2,5 ton
Ongeveer 5 ton

(ii) Vir wydtes>1 225 mm
Ongeveer 5 ton

Die klant se naam en adres word op die boonste plaat van elke saamgestelde bondel aangebring.
Wanneer bondelgroottes van ongeveer 1,25 en 2,5 ton bestel word vir versending na 'n klant, behou ons, ons die reg voor om 'n aantal kleiner bondels saam te bind in een gesamentlike bondel van ongeveer 5 ton. In sulke gevalle word die klant se naam en versendingsadres slegs op die boonste bondel aangebring, terwyl die kleiner bondels so gemerk word dat dit maklik met die boonste bondel vereenselwig kan word. Klante moet op die bestelling aandui indien hulle enige probleme ondervind met hierdie saamgestelde bondels.

(b) Rolle

Fynplaat in rolle word stewig met bande gebind.
Rolle word in groepe saam geweeg, en gemiddelde massa bepaal deur die getal, is nie noodwendig die werklike massa van enige individuele rol nie.

(c) Smalband

(i) Enkelrolle of bondels rolle kan vir vervoerdoeleindes met staalband saamgebind word in saamgestelde bondels rolle. Die staalbande wat sulke saamgestelde bondels bind, kan deur die geadresseerde vir aflaaidoeleindes gesny word.

(ii) Bondels rolle word geweeg, en uit die getal rolle per bondel word 'n gemiddelde massa per rol bepaal. Die gemiddelde massa is nie noodwendig die werklike massa van enige rol nie.

5.1 OVERANGE OR UNDERAGE

(a) For each item of an order we reserve the right to supply within the tolerances given below:-

Where a minimum or maximum quantity is specified the overage or underage will be the total of the applicable plus and minus tolerance.
For restrictions on the above tolerances refer page P8 par. 6.

5.2.1 BUNDLING

(a) Cut Lengths

Sheets are packed in bundles, suitably tied by means of bands, in the following sizes:-

(i) For widths≤1 225 mm
Approximately 1,25 tons
Approximately 2,5 tons
Approximately 5 tons

(ii) For widths>1 225 mm
Approximately 5 tons

The customer's name and address are indicated on the top sheet of each composite bundle. When bundle sizes of approximately 1,25 and 2,5 tons are ordered for dispatch to one customer, we have the option of making up composite bundles up to approximate 5 tons by strapping together a number of the smaller bundles. In such cases, the customer's name and address are indicated on the top bundle only and each of the smaller bundles is marked so as to associate it with the top bundle. Customers should indicate on the order if any difficulties are experienced with these composite bundles.

(b) Coils

Sheets in coils are securely strapped with bands.
Coils are die weighed in groups, and the mass of the group averaged over the number of coils.
This average mass is not intended to be the actual mass of any individual coil.

(c) Slit Strip

(i) Individual coils or bundles of coils may be strapped together to form a composite bundle of coils for transporting purpose. Bands securing such composite coils can be cut by the consignee for off-loading purposes.

(ii) Coils will be weighed in bundles and the mass averaged over the number of coils in the bundle. The average mass is not intended to be the actual mass of any individual coil.

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5.5 EINDVERBRUIK (VERVOLG)

Dit sal uit die voorgaande prosedures duidelik blyk dat die daarstelling van 'n omvattende afkeurvlak vir klante nie moontlik is nie, veral wanneer klante by die vervaardiging van 'n verskeidenheid verskillende persstukke betrokke is. Gevalle sal afsonderlik behandel moet word, en falingstoelatings sal vir elke uitgekende deel vasgestel moet word.

Die prosedure wat hierbo in breë trekke beskryf is, lei tot die gevolgtrekking dat watter aanvaarbare falingsvlak ook al vasgestel word betrekking sal hê op die besondere persstuk. Enige verandering aan die ontwerp, byvoorbeeld 'n modelverandering, sal die vasstelling van 'n nuwe aanvaardingsvlak noodsaak.

6. CORTEN

Waar deur-dikte sterkte en/of goeie vormbaarheid verlang word, moet Corten A-F in voorkeur bo Corten A gespesifiseer word.

5.5 END USE (CONTINUED)

It will be clear from the foregoing procedures that the establishment of a blanket rejection level for customers is not possible, particularly where customers are engaged in manufacturing a variety of different pressings. Cases will have to be dealt with individually and breakage allowances be established for each identified part.

The procedure outlined above infers that whatever the acceptable breakage level established it will relate to the particular pressing. Any change to the design, such as for example a model change, will necessitate the establishment of a new acceptance level.

Where through thickness strength and/or good formability is required Corten A-F should be specified in preference to Corten A.

EISE : TOELATINGSBELEID

1. INLEIDING

By die produksie van warmgewalste, koudgewalste en versinkte fynplaat is daar afwykings wat inherent is in die staal en die verwerking daarvan, wat verhoed dat dit geheel en al aan die vereistes voldoen ten opsigte van die produkeienskappe wat deur die klant verlang word.

Die inligting hieronder uiteengesit, is veronderstel om aan die Korporasie se Klante 'n duidelike beeld te gee van sy verantwoordelikhede met betrekking tot die mees algemene afwykings in fynplaat wat in rolle en gesnyde lengtes vervaardig word.

2. OPPERVLAKINSPEKSIE

Dit is gewone praktyk om die boonste oppervlak van gesnyde lengtes te inspekteer, wanneer dit van rolle in lengtes gesny word. Rolle word nie geïnspekteer nie, maar die kant met die gespesifiseerde oppervlakafwerking sal aangedui wees. Omdat die bokant van 'n gesnyde lengte of aangeduide kant van 'n rol die kant is met die gespesifiseerde oppervlakafwerking mag die anderkant meer dikwels oppervlakimperfeksies bevat. Voorsorg maatreëls moet getref word om die aangeduide kant te gebruik vir die kritiese oppervlak van 'n gefabriseerde onderdeel te gebruik.

Rolle bevat meer oppervlakimperfeksies as gesnyde lengtes aangesien dit nie moontlik is om die gedeeltes wat die imperfeksies bevat af te keer en te sorteer, soos in die geval van gesnyde lengtes nie.

3. WALSDEFEKTE WAARVOOR GEWYSIGDE EISTOELATINGS GEMAAK KAN WORD

3.1 Gesnyde Lengtes

3.1.1 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

3.1.2 Herstelbare imperfeksies (verwys par. 5).

3.2 Rolle

3.2.1 Binne- en Buiteomwindsels slegs vir materiaal wat tot dikte teruggesny is.

OPMERKING:

(a) Warmgewalste walsrandrolle word direk vanaf die Warmbandwalse voorsien, en mag tot en met 7 meters buite dikte toleransie per rol (albei ente ingesluit) bevat wat onvoorwaardelik deur die klant aanvaar moet word.

(b) Koudgewalste rolle wat sonder terugsnyding tot dikte bestel word, mag tot 50 meters (albei ente ingesluit) buite diktetoleransie wees, wat die klant moet aanvaar sonder om enige eis in te stel.

3.2.2 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

4. TOELATINGSBELEID

Walsdefekte wat afkeurings tot gevolg het, wat die persentasie hieronder gespesifiseer oorskry, kan op Yskor se rekening geplaas word op die grondslag van 'n gewysigde eistoelating.

Die nakoming moet gebaseer word op minstens 50% van die bestelde massa per omstrede item.

4.1 Gesnyde lengtes

4.1.1 Toelaatbare persentasie afkeurings ten opsigte van bestelde massa per item - 1%.

4.1.2 Afsonderlike pakke

8% afkeurings moet aanvaar word sonder dat enige eis ingestel word.

Enige pak met 'n klaarblyklike hoë frekwensie van walsimperfeksies mag opsy gesit word vir klagteondersoek.

Wanneer daar vasgestel word dat afkeurings meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n pak so spoedig as moontlik staak, nadat die 8% minimum van die massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Waar die afkeurings 8% of minder is, moet die afkeurings ingesluit word vir die bepaling van die algehele gemiddelde vlak van afkeurings (verwys paragraaf 4.1.1.). Indien meer as 8% sal die pak onderworpe wees aan afsonderlike onderhandeling.

CLAIMS : ALLOWANCE POLICY

1. INTRODUCTION

The production of Hot Rolled, Cold Rolled and Galvanised sheet involves variations inherent in the steel and processing, which prevent the realisation of complete conformity to the product attributes desired by the customer.

The information set forth below is intended to give the Corporation's Customers a clear understanding of its responsibilities relating to the most common variations in sheet produced in coils and cut lengths.

2. SURFACE INSPECTION

It is common practice to inspect the top surface of cut lengths as they are sheared to length from coils. Coils are not inspected, but the side with the specified surface finish will be identified. Because the top side of a cut length or identified side of a coil is the side with the specified surface finish, the opposite side may contain more frequent surface imperfections.

Precautionary measures should be taken to use the identified side for the most critical surface of a fabricated part.

Coils contain more surface imperfections than cut lengths as it is not possible to reject and sort portions containing such imperfections, as is the case with cut lengths.

3. MILL DEFECTS FOR WHICH ADJUSTED CLAIM ALLOWANCE CAN BE MADE

3.1 Cut Lengths

3.1.1 Non-repairable imperfections (surface and/or breakage).

3.1.2 Repairable imperfections (refer paragraph 5).

3.2 Coils

3.2.1 Inner and outer wraps for material cut back to thickness only.

NOTE:

(a) Mill rum, mill edge coils are supplied direct from the Hot Strip Mills and may contain up to 7 metres per coil (both ends included) out of thickness tolerance which customer must accept without claim.

(b) Cold-rolled coils ordered not cut back to thickness, may contain up to 50 metres (both ends included) out of thickness tolerance which the customer must accept without claim.

3.2.2 Non-repairable imperfections (surface and/or breakage).

4. ALLOWANCE POLICY

Mill defects resulting in rejections exceeding the percentage specified below are chargeable to Iscor on an adjusted claim allowance basis.

The performance must be based on at least 50% of the ordered mass per item in dispute.

4.1 Cut Lengths

4.1.1 Percentage reject allowance on ordered mass per item - 1%.

4.1.2 Individual lifts

8% rejections must be accepted without claim.

Any lift with an apparently high frequency of mill imperfections may be set aside for claims investigation.

When rejections are determined to be over 8%, at least 8% of the lift will have to be processed to enable a reasonable assessment to be made of the reject level. The processor should discontinue the processing of such a lift as promptly as practicable after processing the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications. If rejections are 8% or less, these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.1.1.). If more than 8%, the lift will be subject to separate negotiation.

EISE : TOELATINGSBELEID (VERVOLG)

4.2 Rolle

4.2.1 Toelaatbare persentasie afkeurings op bestelde massa per item:
3% op 200 ton en meer
4% op 100 ton tot onder 200 ton
5% op onder 100 ton
Bogenoemde toelaatbare persentasie afkeurings kan soos volg gewysig word:

(a) Dit sal met 1% verminder word as 3.2.1. nie in die afkeuringsakkumulering ingesluit is nie.

(b) Dit sal met 1% verminder word as 3.2.2 nie in die afkeuringsakkumulering ingesluit is nie.

4.2.2 Afsonderlike rolle
10% afkeurings moet aanvaar word sonder dat enige eis ingestel word. Enige rol met klaarblyklike hoë frekwensie van wals imperfeksies, mag opsy gesit word vir klagteondersoek.
Wanneer daar vasgestel word dat afkeurings meer as 10% uitmaak sal minstens 10% van die rol verwerk moet word, om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n rol so spoedig as prakties moontlik staak, nadat die 10% minimum van die verskeepte massa van die afsonderlike rol verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die afkeurings 10% of minder is, moet die afkeurings ingesluit word in die bepaling van die algemene gemiddelde vlak van afkeuring (verwys na paragraaf 4.2.1). Indien meer as 10%, sal die rol onderworpe wees aan afsonderlike onderhandeling.

5. EISE VIR METAALAFWERKING VAN HERSTELBARE IMPERFEKSIES VAN TOEPASSING OP MATAFWERKING-BLOOTGESTELDE BUITEAANWENDINGS (ISF) ALLEEN (VOORSIEN AS GESNYDE LENGTES)
Dié materiaal word gelewer met dien verstande dat 'n mate van herverwerking deur die klant aanvaarbaar moet wees. Ooreenkomstig die algemene eisetoelatingsbeleid is die volgende van toepassing:

5.1 Totale massa per bestelde item
Tot en met 1% metaalafwerking van fynplate moet deur klant aanvaar word sonder dat enige eis ingestel word. 1% beteken hier dat 1% van die oppervlakarea metaalafgewerk moet wees.

5.2 Afsonderlike pakke
8% metaalafwerking moet aanvaar word sonder dat enige eis ingestel word. Enige pak wat klaarblyklik 'n hoë frekwensie van metaal-afwerking vereis, mag opsy gesit word vir klagteondersoek. Wanneer daar vasgestel word dat die metaalafwerking verlang meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die metaalafwerking verlang. Die verwerker moet die verwerking van so 'n pak so spoedig as prakties moontlik staak, nadat die 8% minimum van verskeepte massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die metaalafwerking verlang 8% of minder is, moet die metaalafwerking verlang ingesluit word vir die bepaling van die algehele gemiddelde vlak van metaalafwerking (verwys na paragraaf 5.1).
Indien meer as 8% sal die pak onderworpe wees aan afsonderlike onderhandeling.

5.3 Eise vir herstelbare defekte van toepassing op ander oppervlakafwerkings en/of produkte (bv. warmgewals) word nie normaalweg deur die Korporasie aanvaar nie, hoewel, enige sodanige eis wat ingedien word sal volgens meriete behandel word en is onderhewig aan onderhandeling.

6. ALGEMEEN
Die bedrag van enige eis is beperk tot die prys wat vir die betrokke produk betaal is, plus vervoerkoste deur die koper betaal.
Die werklike toelating is die totale persentasie van opgehoopte afgekeurde persentasies, gebaseer op massa per bestelde item, min die verhaalbare waarde.

CLAIMS : ALLOWANCE POLICY (CONTINUE)

4.2 Coils

4.2.1 Percentage rejects allowance on ordered mass per item:
3% on 200 tons and over
4% on 100 tons to under 200 tons
5% on under 100 tons
Adjustment to the above percentage allowance may be made as follows:

(a) 1% will be deducted when 3.2.1 is not included in the rejection accumulations.

(b) 1% will be deducted when item 3.2.2 is not included in the rejection accumulations.

4.2.2 Individual coils
10% rejections must be accepted without claim. Any coil with an apparantly high frequency of mill imperfections, may be set aside for claims investigations. When rejections are determinde to be over 10% at least 10% of the coil will have to be processed to enable a reasonable assessment to be made of the reject level. The processor must discontinue the processing of such coil as promtly as practicable after processing the 10% minimum of shipped mass of the individual coil in order to preserve the possible usefulness of the material for other applications. If rejections are 10% or less these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.2.1). If more than 10%, the coil will be subject to separate negotiation.

5. CLAIMS FOR METAL FINISHING OF REPAIRABLE IMPERFECTIONS APPLICABLE TO MATT FINISH EXPOSED EXTERIOR APPLICATIONS (ISF) ONLY (SUPPLIED AS CUT LENGTHS)
This mateal is supplied on the distinct understanding that some reworking by the customer is to be acceptable. In line with the general claims allowance policy the following will apply:

5.1 Total mass per item ordered
Up to 1% metal finishing of sheets must be accepted by customer without claim. 1% here means 1% surface area to be metal finished.

5.2 Individual lifts
8% metal finishing must be accepted without claim. Any lift apparently requiring a high frequency of metal finishing may be set aside for claims investigation. When metal finishing required is determined to be over 8% at least 8% of the lift must be processed to enable a reasonable assessment to be made of the metal finishing required. The processor must discontinue the processing of such lifts as promptly as practicable after processing of the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications.

If metal finishing required is 8% or less, the metal finishing required must be incorporated for determining the overall average metal finishing level (refer to paragraph 5.1).
If more than 8%, the lift will be subject to a separate negotiation.

5.3 Claims for repairable defects applicable to other surface finishes and/or product (e.g. hot rolled) would not normally be accepted by the Corporation. However, any such claim submitted will be treated on merit, and would be subject to negotiation.

6. GENERAL
The amount of any claim is limited to the price paid for product concerned, plus transportation charges paid by the buyer.
The actual allowance will be the total percentage of accumulated rejection percentages, based on mass per ordered item, less the recovery value.

DECLASSIFIED

S.P.E. 130

YSKOR BEPERK ISCOR LIMITED

KOUDGEWALSTE FYNPLAAT

ROLLE - SMALBAND - LENGTES

COLD ROLLED SHEETS

COILS - SLIT STRIP - LENGTHS

DECLASSIFIED

S.P.E. 130

KOUDGEWALSTE SMALBAND - ROLLE
KOUDGEWALSTE FYNPLAAT - ROLLE/LENGTES

VOORWOORD

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Alle pryse is onderworpe aan 'n verefeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.
3. Tensy anders bestel, is alle items onderworpe aan 'n oormaat of ondermaat - sien bladsy S7 par. 4.
4. Materiaal gedek deur hierdie S.P.E. word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die geykte massameter/massameterbrug by die Werke. Enige verwysing na die getal plate/rolle op die faktuur of vragbrief is slegs vir inligting.
5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.
6. Normale toetsing en inspeksie, soos in die verskillende spesifikasies uiteengesit word uitgevoer. Wanneer bykomende inspeksie en/of toetsing verlang word sal 'n ekstra gehef word - sien bladsy P8.
7. Pryse en ekstras is dié wat op die versendingsdatum geld, en is onderworpe aan veranderings sonder kennisgewing.
8. Wanneer bestel word, moet klante altyd die eindgebruik spesifiseer.
9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.
10. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.
11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

COLD ROLLED SLIT STRIP - COILS
COLD ROLLED SHEETS - COILS/LENGTHS

PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.
2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.
3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - see page S7 par. 4.
4. Material covered by this S.P.E. are sold at a price per metric ton (1 000 kilograms) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of sheets/coils on the invoice or consignment note is for information only.
5. Extras and deductions quoted herein are per metric ton, unless otherwise stated. Each extra or deduction is separate and distinct.
6. Normal testing and inspection as outlined in the various specifications are carried out. When additional inspection and/or testing is required, extras will be be charged - see page P8.
7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.
8. When ordering customers should always state the end use.
9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.
10. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.
11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD

A.	Pryse	Bladsy
1.	Basisprys	P1
2.	Hoeveelheidsekstras/Aftrekkings	P1
3.	Grootte-ekstras	P2 & P3
4.	Kwaliteitsekstras	P4 & P5
5.	Verwerkings-/Metallurgiese vereistes	P6 - P8
6.	Verpakkingsekstra	P9 - P11
7.	Harde onuitgegloeide rolle	P11
B.	STANDAARDVERVAARDIGINGSPRAKTYK	
1.	Omvang	S1
2.	Kwaliteit	S1 & S2
3.	Toleransies/Bondels	S2 - S6
4.	Algemeen	S7 - S8
5.	Produkinligting	S8 - S10

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A.	Prices	Page
1.	Basis Price	P1
2.	Quantity Deductions/Extras	P1
3.	Size Extras	P2 & P3
4.	Quality Extras	P4 & P5
5.	Processing/Metallurgical requirements	P6 - P8
6.	Packing Extras	P9 - P11
7.	Hard unannealed coils	P11
B.	STANDARD MANUFACTURING PRACTICE	
1.	Scope	S1
2.	Quality	S1 & S2
3.	Tolerances/Bundles	S2 - S6
4.	General	S7 - S8
5.	Product Information	S8 - S10

S.P.E. 130

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer
2. PRODUK:
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - spesifiseer
   (g) Oppervlak afwerking
   (h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Beperking op oor-/ondermaat
4. Wydte en dikte
5. Lengte
6. Kwaliteit
7. Spesiale verwerkings/metallurgiese vereistes
8. Verpakkingsekstras
9. Invoerheffing (R 10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Mariasburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport
2. PRODUCT:
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - specify
   (g) Surface finish
   (h) End uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Restriction on over-/underage
4. Width and thickness
5. Length
6. Quality
7. Special processing/metallurgical requirements
8. Packing extras
9. Import Levy (R 10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

GECANCELLED

KOUDGEWALSTE SMALBAND/FYNPLAAT — COLD ROLLED SLIT STRIP/SHEETS

A. PRYSE
PRICES

1. BASISPRYS: (Gebaseer op handelskwaliteit koudgewalste rolle uitgegloei en getemperwals. Nie geïnspekteer, nie teruggesny na dikte nie).

(a) PWV 1) -gebied ..... R462-50 /1000 kg v.o.s. Yskorwerke, Vanderbijlpark, (Sylyn 1414, Bijlkor), plus padvervoer/spoorvrag.

(b) Buite PWV 1) gebied ... R462-50 /1000 kg v.o.s. Germiston plus spoorvrag.
1) Verwys Kontrolelys par. C.

1. BASIS PRICE: (Based on commercial quality cold rolled coils annealed and temper rolled. Uninspected, not cut back to thickness).

(a) PWV 1) area ..... R462-50 /1000 kg f.o.r. Iscor Works, Vanderbijlpark, (Siding 1414, Bijlkor), plus cartage/railage.

(b) Outside PWV 1) area ... R462-50 /1000 kg f.o.r. Germiston plus railage.
1) Refer Check List par. C.

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS
QUANTITY EXTRAS/DEDUCTIONS

2.1 Itemekstras/Aftrekkings
Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigings-bestelling deur die Korporasie uitgereik t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.1 Item Extras/Deductions
The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

ITEM 1)	EKSTRA/EXTRA	AFTREKKINGS/DEDUCTIONS
TON/TONS	R.c./TON	R.c./TON
2 - < 5	87-85	
5 - < 10	55-50	
10 - < 20	27-75	
20 - < 40	13-90	
40 - < 80	7-00	
80 - < 150	0-00	0-00
150 - < 300		4-65
300 - < 500		7-00
⩾ 500		13-90

1) OPMERKINGS: Minimum massa per item:
(a) Alle materiaal ⩽ 1225 mm wyd: 10 ton/item (< 10 ton/item aanvaarbaar vir Handelskwaliteit gesnyde lengtes in standaard wydtes en diktes alleen).

(b) Alle materiaal > 1225 mm wyd: 20 ton/item (< 20 ton/item op aansoek).

1) NOTES: Minimum mass per item:
(a) All material ⩽ 1225 mm wide: 10 tons/item (< 10 tons/item acceptable for Commercial Quality cut lengths in standard widths and thicknesses only).

(b) All material > 1225 mm wide: 20 tons/item (< 20 tons/item on application).

2.2 BEPERKING OP OOR- OF ONDERMAAT TOELATING
(Verwys bladsy S.7 Para 4.1)
(i) 50% van standaard oor- of ondermaat toelating (2408) R8-80
(ii) Wanneer 2½% oor- of ondermaat van item massa gespesifiseer word ..... (2409) ..... R13-55 (Slegs van toepassing op items onder 100 ton).
(iii) (a) Vir gespesifiseerde minimum hoeveelhede (2440) R3-50
(b) Vir gespesifiseerde maksimum hoeveelhede (2293) R3-50
(Uitsluitende ekstras vir beperkings op oor- of ondermaat)

2.2 LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE
(Refer page S7 Para 4.1)
(i) 50% limitation on standard overage or underage (2408)..... R8-80
(ii) When 2½% overage or underage of item mass is specified ..... (2409) ..... R13-55 (Applicable only to items under 100 tons.)
(iii) (a) For specified minimum quantities (2440).... R3-50
(b) For specified maximum quantities (2293).... R3-50
(Excluding extras for restrictions on overage or underage)

3. GROOTTE-EKSTRAS / SIZE EXTRAS

3.1 STANDAARDWYDTE- EN DIKTE-EKSTRAS / STANDARD WIDTH AND THICKNESS EXTRAS

3.1.1 SMALBAND IN ROLLE / SLIT STRIP IN COILS

(Teruggesny na dikte) (Cut back to thickness)

STANDAARD DIKTE (mm) / STANDARD THICKNESS (mm)	WYDTE (mm) - STANDAARD - 5 mm TRAPPE - * NIE-STANDAARD - 1 mm TRAPPE WIDTH (mm) - STANDARD - 5 mm INCREMENTS - * NON-STANDARD - 1 mm INCREMENTS					
	25 - < 50	50 - < 75	75 - < 150	150 - < 250	250 - < 400	400 - < 600
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
2,0	90-15	66-70	55-00	43-55	34-30	28-40
1,8	88-20	63-55	52-05	40-70	31-50	25-70
1,6	85-25	60-70	49-30	37-85	28-40	22-85
1,4	89-15	64-50	53-10	41-80	32-20	26-70
1,2	90-95	63-20	56-90	45-65	36-00	30-25
1,1	97-45	73-00	61-60	50-20	40-70	35-10
1,0	102-45	77-70	66-45	55-00	45-65	39-70
0,9	107-00	82-30	70-95	59-70	50-20	44-40
0,8	111-70	87-30	75-75	64-50	55-00	49-30
0,7	116-55	91-85	80-50	69-35	59-70	54-05
0,6	121-15	96-65	85-25	73-85	64-50	58-90
0,55	129-80	105-30	93-85	82-30	73-00	67-35
0,50	138-40	113-70	102-45	90-95	81-45	75-75
0,45	146-70	122-15	110-75	99-50	90-20	-
0,40	155-45	130-75	119-40	107-95	98-60	-

3.1.2 ROLLE EN GESNYDE LENGTES / COILS AND CUT LENGTHS

STANDAARD DIKTE (mm) / STANDARD THICKNESS (mm)	WYDTE (mm) - STANDAARD - 25 mm TRAPPE. * NIE-STANDAARD - 5 mm TRAPPE WIDTH (mm) - STANDARD - 25 mm INCREMENTS * NON-STANDARD - 5 mm INCREMENTS										
	600 - < 800	800 - < 925	925	> 925 - < 1000	1 000	> 1 000 - < 1 200	1 200	> 1 200 - < 1 500	1 500	> 1 500 - < 1 800	1 800
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
2,0	24-70	19-10	15-20	16-95	12-35	14-20	5-60	9-50	7-20	13-35	11-65
1,8	21-85	16-00	12-35	14-20	9-50	11-50	2-80	6-65	4-30	10-35	8-30
1,6	19-10	13-30	9-50	11-50	6-65	8-55	0-00	3-60	1-55	8-00	4-95
1,4	22-85	16-95	13-30	15-20	10-55	12-35	3-60	7-75	5-60	11-65	8-70
1,2	26-70	20-95	16-95	19-10	14-20	16-00	7-65	12-25	10-10	14-95	13-10
1,1	31-50	25-70	21-85	23-85	19-10	20-95	12-35	17-05	15-20	21-00	19-60
1,0	36-00	30-25	26-70	28-40	23-85	25-70	16-95	22-45	20-75	28-70	27-20
0,9	40-70	35-10	31-50	33-15	28-40	30-25	21-85	28-45	27-15	35-05	33-85
0,8	45-65	39-70	36-00	37-85	33-15	35-10	26-70	34-20	33-00	41-50	40-50
(a) 0,7	50-20	44-40	39-70	42-70	37-85	39-70	31-50	38-85	37-75	46-40	-
(b) 0,6	55-00	49-30	45-65	47-45	42-70	44-40	36-00	43-95	-	-	-
(b) 0,55	63-55	57-80	54-05	55-95	51-10	53-10	44-40	52-35	-	-	-
(c) 0,50	72-20	66-45	62-45	64-50	59-70	61-60	53-10	62-25	-	-	-
(e) 0,45	80-50	74-80	70-95	73-00	68-20	70-15	-	-	-	-	-
(e) 0,40	89-15	83-35	79-80	81-45	76-70	78-60	-	-	-	-	-
(d)(e) 0,35	97-45	91-85	88-20	90-20	85-25	87-05	-	-	-	-	-
(d)(e) 0,30	106-00	100-30	96-60	98-60	93-85	94-80	-	-	-	-	-

(a) Maks. wydte / max. width : 1 550 mm
(b) Maks. wydte / max. width : 1 400 mm
(c) Maks. wydte / max. width : 1 225 mm
(d) Slegs rolle / Coils only.
(e) Maks. wydte/Max. width 1050 mm

GECANCELLED

3. GROOTTE-EKSTRAS (VERVOLG) SIZE EXTRAS (CONTINUED)

3.2 NIE-STANDAARDDIKTE-EKSTRAS

Vir diktes tussen twee standaarddiktes is die ekstra vir die standaarddikte (par. 3.1) waarvoor die hoër ekstra geld, van toepassing, plus die volgende:-

3.2 NON-STANDARD THICKNESS

For thicknesses between two standard thicknesses, the extra for the standard thickness (par. 3.1) bearing the higher extra applies, plus the following:-

NIE-STANDAARDDIKTE/ NON-STANDARD THICKNESS		EKSTRA/ EXTRA
DIKTE/THICKNESS (mm)	TRAPPE/INCREMENTS (mm)	
		R.c.
2,0 - 1,4	0,1	8-45
< 1,4 - 0,6	0,05	8-45
< 0,6 - 0,3	0,01	8-45

3.3 * NIE-STANDAARDWYDTE-EKSTRAS

Vir nie-standaardwydtes geld die ekstras soos in die wydte- en diktetabel aangetoon (Par. 3.1) plus die volgende:-

(a) Smalband - Nie-standaard trappe van 1 mm R8-45

(b) Fynplaat/Rolle - Nie-standaard trappe van 5 mm R8-45

3.3 * NON-STANDARD WIDTH EXTRA

For non-standard widths the extras shown in the width and thickness table (Par. 3.1) apply plus the following:-

(a) Slit Strip - Non-standard increments of 1 mm ....,... R8-45

(b) Sheets/Coils - Non-standard increments of 5 mm R8-45

3.4 STANDAARD LENGTE-EKSTRAS

(Sluit normale inspeksie in)
VIR WYDTES 600 - 1800 mm

3.4 STANDARD LENGTH EXTRAS

(Includes normal inspection)
FOR WIDTHS 600 - 1800 mm

DIKTE THICKNESS (mm)	LENGTE/LENGTH					
	TRAPPE VAN 25 mm / INCREMENTS OF 25 mm					
	1,0 - 1,2 m	>1,2 - 1,5 m	>1,5 - 2,5 m	>2,5 - 3,5 m	>3,5 - 4,5 m	>4,5 - 5,0
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
1,2 - 2,0	31-50	26-70	21-85	21-85	24-70	30-25
0,8 < 1,2	33-15	28-40	23-85	23-85	26-70	-
0,6 < 0,8	35-10	30-25	25-70	24-70	28-40	-
0,5 < 0,6	37-85	33-15	28-40	28-40	30-25	-
0,4 < 0,5	41-80	36-00	31-50	-	-	-

LENGTEBEPERKINGS:
Verwys bladsy S2 Para. 2.4

3.5 NIE-STANDAARD LENGTE-EKSTRAS

Vir nie-standaardlengtes geld die ekstras soos in die standaardlengte-tabel (paragraaf 3.4) plus die volgende:-
Nie-standaard trappe van 5 mm R3-60

LENGTH LIMITATIONS:
Refer page S2 Para. 2.4

3.5 NON-STANDARD LENGTH EXTRAS

For non-standard lengths the extras shown in the standard length table (paragraph) 3.4) apply plus the following:-
Non-standard increments of 5 mm R3-60

4. KWALITEITSEKSTRAS / QUALITY EXTRAS

Aangeduide analises is gietpotanalise

Indicated analyses are ladle analysis

4.1 HANDELSKWALITEITE / COMMERCIAL QUALITY

KODE CODE		EKSTRA/ EXTRA
123	Handelskwaliteit (koolstof 0,15% maks.) Commercial Quality (carbon 0,15% max.)	R.c. 0-00

4.2 KOOLSTOFKWALITEIT / CARBON QUALITY

KODE CODE		EKSTRA/ EXTRA
099	SAE/AISI 1010 (C 0,08 - 0,13% Mn 0,30 - 0,60%) PO,040% SO,050% maks/max	9-25
184	SAE/AISI 1012) (C 0,10 - 0,15% Mn 0,30 - 0,60%) Vir swaardiens staalbande - Maks. wydte 1 000 m For heavy duty steel strapping - Max. width 1 000 m	9-25
601	WQ1 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%)	21-00
602	WQ2 (Welding Quality C 0,08 - 0,13% Mn 0,30 - 0,60%) PO,020% SO,028%	21-00
603	WQ3 (Welding Quality C 0,10 - 0,15% Mn 0,40 - 0,60%) maks/max	21-00

4.3 TREK EN EMALJEERKWALITEIT / DRAWING AND ENAMELLING QUALITY

KODE CODE		EKSTRA/ EXTRA
134	*Trek- en emaljeerkwaliteit/Drawing and Enamelling Quality	52-50
132	Brandemaljekwaliteit (Selfbuigbestandheid nie gewaarborg)/ Vitreous Enamelling Quality (Not quaranteed sag resistant)	20-25
	*Minimum dikte/Minimum thickness 0,5 mm Oppervlak afwerking - aanbeveling - Kode 3146 Hoë mat. Indien enige ander oppervlakafwerking gespesifiseer is moet die bestelling endosseer word met:- Kode 3267 Waarborg: Geen vir emaljering doeleindes, indien oppervlakafwerking, mat algemene doeleindes gespesifiseer is. Surface finish - Recommended. Code 3146 - High matt. If any other surface finish is specified the order must be endorsed with: Code 3267 Guarantee: None for enamelling purposes if surface finish mat general purpose is specified.	
	B.S. 1449	
159	KCR1 - Gestabiliseerd/Stabilized	59-00
638	CR2 *	32-25
639	CR3 *	31-00
640	CR4	7-25
	Opmerking: * Gespesifiseerde Meganiese eienskappe - op aansoek Note: * Specified Mechanical Properties - on application only.	

4.4 LAE DRUK GASSILINDER KWALITEIT / LOW PRESSURE GAS QUALITIES

KODE CODE		EKSTRA/ EXTRA
082	(a) Laedrukgassilinder- staal- Gr. 255 (geskik vir die vervaardiging van silinders volgens SABS 219) Low Pressure Gas Cylinder Steel- Gr. 255 (suitable for the manufacture of cylinders to SABS 219)	45-50
	(a) Groottebeperkings / Size Limitations Dikte/Thickness (mm) — Wydte/Width (mm) 1,6 - 2,0 — 1 800 Maks./Max. 1,2 - < 1,6 — 1 500 Maks./Max. 0,9 - < 1,2 — 1 250 Maks./Max. 0,5 - < 0,9 — 1 225 Maks./Max. 0,3 - < 0,5 — 1 000 Maks./Max.	

4. KWALITEITSEKSTRAS (VERVOLG)
QUALITY EXTRAS (CONTINUED)

4.5 STRUKTUUR KWALITEITE 4.5 STRUCTURAL QUALITIES

KODE CODE		EKSTRA/ EXTRA
512	C.M.E. 9 Simbool/Symbol 8 (min 10 ton/s per item) (Word Koperhoudend voorsien volgens die spesifikasie/ Supplied Copper bearing in accordance with the specification) Ekstras vir bywoning van toetse en oppervlak inspeksie deur die S.A.S. Inspekteur/ Extras for witnessing of tests and surface inspection by the S.A.R. Inspector	38-75
3313	(i) Bywoning van Meganiesetoetse/ Witnessing of Mechanical Tests	2-10
3329	(ii) Oppervlak inspeksie/ Surface inspection	4-25

4.6 ATMOSFERIES ROESBESTANDE KWALITEIT 4.6 WEATHER RESISTANT QUALITY

KODE CODE				EKSTRA/ EXTRA
124	Cor-Ten A (Min. 10 ton(s) per item) Grootte beperkings/Size limitations			R.c. 173-25
	DIKTE/THICKNESS (mm)	WYDTE/WIDTH (mm)		
		SMALBAND/SLIT STRIP	ROLLE EN/OF GESNYDE LENGTES COILS AND/OR CUT LENGTHS	
	1,5 - 2,0	175 - < 600	600 - 1225	
	1,4 - < 1,5	125 - < 600	600 - 1075	
	0,8 - < 1,4	100 - < 600	600 - 925	
	0,6 - < 0,8	50 - 450	600 - 925	

5. SPESIALE VERWERKINGSEKSTRAS
SPECIAL PROCESSING EXTRAS

KODE CODE	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER/ APPLICABLE ONLY IF SPECIFIED ON ORDER		EKSTRA/ EXTRA
			R.c.
2063	5.1 TERUGSNY NA DIKTE (ROLLE 600 mm WYD) (Nie van toepassing op hard onuitgegloeide rolle)	5.1 CUT BACK TO THICKNESS (COILS 600 mm WIDE) (Not applicable to hard unannealed coils)	11-50
	5.2 TOLERANSIE-EKSTRA VIR BEPERKTE DIKTE (Min. dikte 0,50 mm) - Terugsny na dikte (rolle) is verpligtend. Vir kleiner dikte-toleransie, maar minstens -	5.2 RESTRICTED THICKNESS TOLERANCE EXTRA (Min. thickness 0,50 mm) - Cut back to thickness (coils) is compulsory. For closer thickness tolerances, but not more restrictive than -	
2056	75% van normale toleransie	75% of normal tolerance	12-40
2057	50% van normale toleransie ..... (onderworpe aan bevestiging)	50% of normal tolerance ..... (subject to confirmation)	31-50
2054	5.3 OLIE MET STANDAARD-OLIE	5.3 OILING WITH STANDARD OILS	4-25
	5.4 HARDE ONUITGEGLOEIDE ROLLE (Verwys bladsy P11)	5.4 HARD UNANNEALED COILS (Refer page P11)	
2015	5.5 WEEG VAN AFSONDERLIKE BONDELS/ROLLE EN DIE AANBRING VAN DIE AANGETEKENDE MASSA OP ELKE BONDEL/ROL	5.5 WEIGHING OF INDIVIDUAL BUNDLES/ COILS AND MARKING THE RECORDED MASS ON EACH BUNDLE/COIL	2-05
	5.6 OPPERVLAKAFWERKING (Verwys bladsy S8 & S9)	5.6 SURFACE FINISH (Refer page S8 & S9)	
2658	5.6.1 Verwerking-Oppervlakafwerking-Koudgewals Mat - Algemene Aanwendings (Beskikbaar in rolle en lengtes)	5.6.1 Processing-Surface finish-Cold Rolled Matt - General Purpose application (Available in coils and lengths)	0-00
2318	5.6.2 Verwerking-Oppervlakafwerking-Koudgewals Mat - Nie blootgstelde trek- en pers aanwendings (Beskikbaar in rolle en lengtes)	5.6.2 Processing-Surface finish-Cold Rolled Matt - Unexposed drawing and pressing applications (Available in coils and lengths)	0-00
2319	5.6.3 Verwerking-Oppervlakafwerking-Koudgewals Mat - Algemene blootgestelde aanwendings (Beskikbaar in rolle en lengtes)	5.6.3 Processing-Surface finish-Cold Rolled Matt - Exposed General Application (Available in coils and lengths)	23-95
2146	5.6.4 Verwerking-Oppervlakafwerking-Koudgewals Mat - Blootgestelde Buiteaanwendings ⩽900 mm wyd >900 mm wyd (Beskikbaar slegs in lengtes)	5.6.4 Processing-Surface finish-Cold Rolled Matt - Exposed Exterior Applications ⩽900 mm wide >900 mm wide (Available in lengths only)	47-45 56-90
2022	5.6.5 Verwerking-Oppervlakafwerking-Koudgewals Algemene plateer aanwendings (Beskikbaar in rolle en lengtes)	5.6.5 Processing-Surface finish-Cold Rolled General Plating Applications (Available in coils and lengths	0-00
2148	5.6.6 Verwerking-Oppervlakafwerking-Koudgewals Kritiese plateer (Kritiese plateeraanwendings) ⩽900 mm wyd >900 mm wyd (Beskikbaar slegs in lengtes)	5.6.6 Processing-Surface finish-Cold Rolled Critical Plating (Critical plating applications) ⩽900 mm wide >900 mm wide (Available in lengths only)	47-45 56-90
3146	5.6.7 Verwerking-Oppervlakafwerking-Koudgewals Hoë mat glasuur emaljering (beskikbaar in rolle of lengtes)	5.6.7 Processing-surface finish-Cold Rolled High, matt vitreous enamelling (Available in coils or lengths)	0-00

OBSOLETE

5. SPESIALE VERWERKINGSEKSTRAS (VERVOLG)
SPECIAL PROCESSING EXTRAS (CONTINUED)

5.7 PLATRIG (2660)
Toleransies soos per bladsy S6 para. 3.9.

5.7 LEVELLING (2660)
Tolerances as per page S6 par. 3.9

DIKTE/ THICKNESS (mm)	WYDTE/WIDTH (mm)	
	600 - 800	800 - 1 800
1,2 - 2,0	R33-00	R17-70
0,8 - < 1,2	R34-60	R19-50
0,6 - < 0,8	R36-55	R21-45
0,5 - < 0,6	R39-45	R24-30

5.8 HERSNY EN/OF HAAKSSNY
(Maks. lengte 4 550 mm)

5.8 RESHEARING AND/OR RESQUARING
(Max. Length 4 550 mm)

NOMINALE MASSA PER FYNPLAAT NOMINAL MASS PER SHEET	TWEE KANTE TWO SIDES (2466)	VIER KANTE FOUR SIDES (2710)
	R.c.	R.c.
≤ 3 kg	39-70	47-45
> 3 - ≤ 6 kg	34-30	41-80
6 - < 10 kg	28-40	36-00
10 - < 15 kg	20-95	28-40
15 - < 30 kg	15-20	22-85
30 - < 50 kg	9-50	16-95
≥ 50 kg	5-60	9-50

OPMERKINGS:
(1) Hersny tot wydte < 600 mm .... Op aansoek
(2) Wydtes 600 - < 800 mm : Maks. lengte : 3 850 mm
(3) Wydtes ≥ 800 mm : Maks. lengte : 4 550 mm

NOTES:
(1) Reshearing to width < 600 mm .... On application
(2) Width 600 - < 800 mm : Max. length : 3 850 mm
(3) Widths ≥ 800 mm : Max. length : 4 550 mm

6. METALLURGIESE VEREISTES / METALLURGICAL REQUIREMENTS

KODE CODE	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER / APPLICABLE ONLY IF SPECIFIED ON ORDER	EKSTRA/ EXTRA
	6.1 Ekstras vir bywoning van toetse en inspeksie deur buite-instansies / 6.1 Extras for Witnessing of tests and inspection by outside authorities	R.c.
	6.1.1 Bywoning van Meganiese toetse / 6.1.1 Witnessing of Mechanical Tests	
	(a) Deur Lloyds Opsiener vir - / (a) By Lloyds Surveyor for -	
3309	(i) Skeepsplaat A/B/Struktuurplaat / (i) Ship Plate A/B/Structural plate	6-70
3310	(ii) Skeepsplaat C/D/E/Ketelplaat / (ii) Ship Plate C/D/E/Boiler Plate	7-95
3311	(b) Deur Germanischer Lloyd vir skeepsplaat / (b) By Germanischer Lloyd for ship plate	8-45
3312	(c) Deur klant / (c) By customer	4-25
	(d) of sy verteenwoordiger anders dan in (a) of (b) genoem soos: / (d) or his representative other than (a) or (b) above such as:	
3313	S.A. Spoorweë/S.A. Railways	2-10
3314	A.B.S.	4-25
3315	General superintendence	4-25
3316	British Engine and Insurance	4-25
3317	T.U.V.	4-25
	(e) Vir elke bykomende verteenwoordiger / (e) For each additional representative	8-50
	6.1.2 Oppervlak inspeksie / 6.1.2 Surface inspection	
3328	(a) Deur klant / (a) By customer	
	(b) of sy verteenwoordiger soos: / (b) or his representative such as:	
3326	Lloyds	8-45
3327	Germanischer Lloyd	8-45
3329	S.A. Spoorweë/S.A. Railways	4-25
3330	A.B.S.	8-45
3331	General Superintendence	8-45
3332	British Engine and Insurance	8-45
3333	T.U.V.	8-45
	(c) Vir elke bykomende verteenwoordiger / (c) For each additional representative	16-90

6.3 Toets- en/of Gietanalise-sertifikate (Gietpotanalise) Van toepassing op handelskwaliteit Koudgewalste Smalband/Fynplaat / 6.3 Test- and/or Cast Analysis Certificates (Ladle Analysis) Applicable to Commercial Quality Cold Rolled Strip/Sheet

PER ITEM TON(S)	GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS)(2003)	TOETS- EN GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ TEST AND CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS)(2005)
	R.c.	R.c.
0 - 10	4-25	8-35
> 10 - 20	3-55	7-40
> 20 - 30	1-90	4-25
> 30 - 40	1-55	2-90
> 40	0-95	1-70

DECLASSIFIED

KOUDGEWALSTE SMALBAND/FYNPLAAT — COLD ROLLED SLIT STRIP/SHEETS

7. VERPAKKINGSEKSTRAS (BETALING VOLGENS BRUTO MASSA) / PACKING EXTRAS (GROSS MASS CHARGED)

7.1 KOUDGEWALSTE SMALBAND EN FYNPLAAT IN ROLLE

Rolle is beskikbaar tot 'n maksimum massa (uitgedruk in kg/mm van wydte) soos uiteengesit in die volgende tabel. (Kliante moet vanaf die tabel die mees aanvaarbare rolgrootte vir hul behoeftes kies en dit op die bestelling spesifiseer.

7.1 COLD ROLLED SLIT STRIP AND SHEET IN COILS

Coils are available to a maximum mass (expressed in kg/mm of width) as set out in the following table. (Customers should select from the table and specify on the order the coil size most suited to their requirements.

7.1.1 EKSTRAS - ROLMASSA
ROLLE GEMONTEER OP OF SONDER WIEGDRAERS

7.1.1 EXTRAS - COIL MASS
COILS MOUNTED ON OR NOT MOUNTED ON CRADLES

MATERIAAL WYDTE / MATERIAL WIDTH (mm)	MASSA VAN ROLLE / MASS OF COILS: MAKS KG/MM WYDTE / MAX KG/MM WIDTH (kg)	MASSA VAN ROLLE / MASS OF COILS: MINIMUM WYDTE / MINIMUM WIDTH (mm)	KODE / CODE	VERDELINGS EKSTRA / SPLITTING EXTRA R.c.	TIPE VERPAKKING: STANDAARD SONDER BESKERMING / STANDARD WITHOUT PROTECTION — SONDER WIEGDRAER / WITHOUT CRADLE — KODE CODE 08 R.c.	STANDAARD SONDER BESKERMING / STANDARD WITHOUT PROTECTION — OP WIEGDRAER / ON CRADLE — KODE CODE 09 R.c.	WATERDIGTE PAPIER/ WATERPROOF PAPER — SONDER WIEGDRAER / WITHOUT CRADLE — KODE CODE 18 R.c.	WATERDIGTE PAPIER/ WATERPROOF PAPER — OP WIEGDRAER / ON CRADLE — KODE CODE 19 R.c.	WATERDIGTE PAPIER MET SKROTBEDEKKING/ WATERPROOFED PAPER WITH SCRAP COVERING — SONDER WIEGDRAER / WITHOUT CRADLE — KODE CODE 28 R.c.	WATERDIGTE PAPIER MET SKROTBEDEKKING/ WATERPROOFED PAPER WITH SCRAP COVERING — OP WIEGDRAER / ON CRADLE — KODE CODE 29 R.c.
SMALBAND IN ROLLE	12,50	150	30	0-00	0-00	1-50	0-00	1-50	2-30	3-55
SLITSTRIP IN COILS	6,25	75	31	1-25	4-30	7-60	4-30	7-60	9-00	12-00
25 - < 600	4,17	40	32	2-45	8-85	13-30	8-85	13-30	15-60	20-20
	3,13		33	3-80	12-90	19-15	12-90	19-15	22-05	28-15
	2,50	-	34	4-90	17-60	25-45	17-60	25-45	28-50	36-50
	2,08	-	35	6-15	21-90	31-20	21-90	31-20	35-25	44-25
ROLLE/COILS	12,50	-	30	0-00	0-00	1-50	0-00	1-50	1-90	3-35
600 - 1800	6,25	-	31	1-25	2-10	5-30	2-10	5-30	5-80	9-00
	4,17	-	32	2-45	4-55	9-05	4-55	9-05	9-75	14-25
	3,13	-	33	3-80	6-60	9-35	6-60	9-35	13-75	19-85
ROLLE/COILS	2,50	-	34	4-90	8-95	16-50	8-95	16-50	17-80	25-50
600 - 1225	2,08	-	35	6-15	11-10	20-65	11-10	20-65	21-90	31-20
	1,79	-	36	7-40	13-30	24-30	13-30	24-30	25-70	36-85
	1,56	-	37	8-60	15-55	27-90	15-55	27-90	33-05	45-15

7.1.2 OPMERKINGS:

(i) Rolle op wiegdraers word normaalweg slegs vir Spoorvervoer aangebied en deurgaans met die oog in die breedte van 'n trok gelaai. Rolle sonder wiegdraers word slegs vir padvervoer aangebied en met die oog in die lengte rigting van 'n vragmotor gelaai. Indien wiegdraers vir padvervoer voer aangevra word moet klant spesifiseer in watter rigting die oog van die rol gelaai moet word. (Massa van wiegdraers is nie by faktuurmassa ingesluit nie).

(ii) Bondelgrootte : Rolle strookstaal word deur middel van bande in bondels gebind in groottes om by werkepraktyk te pas.
Gespesifiseerde maksimum bondelmassa ..... Op aansoek

(iii) Rolmassa : Die rolmassa hierbo aangetoon is onderworpe aan verandering.

(iv) Vir alle Afrikagebiede uitgesluit die RSA en SWA waar Spoorvervoer gebruik word is die maksimum rolmassa 10 ton.

(v) Roes : Verwys bladsy S12 en S13 paragraaf 5.4 en 5.5.

7.1.2 NOTES:

(i) Coils on cradles are normally for rail transport only and coils are loaded with the eye of the coil tranversely onto the truck. Coils without cradles are only for road transport and coils are loaded with the eye of the coil lengthwise onto the motortruck. If cradles for road transport are specified then customer must ensure that the direction of the eye of the coil is specified on an order.(Mass of cradles is not included in the invoice mass)

(ii) Bundle size : Coils Slit strip are strapped together to form bundles in sizes to suit Works' practice

Specified maximum bundle mass ..... On application

(iii) Coil mass : The coil mass indicated above is subject to alteration.

(iv) For all African Territories excluding RSA and SWA where rail transport is used, the maximum coil mass is 10 tons.

(v) Rust : Refer page S12 en S13 paragraph 5.4 and 5.5.

7. VERPAKKINGSEKSTRAS/(VERVOLG)
PACKING EXTRAS (CONTINUED)

Gesnyde lengtes is beskikbaar in die volgende bondelgroottes en tipe verpakking. Die gekwoteerde ekstras is hierop van toepassing. (Klante moet die geskikste bondelgrootte en tipe verpakking vir hul behoeftes kies en dit op die bestelling aandui):-

Cut sheets are available in the following bundle sizes and type of packing for which the quoted extras apply. (Customers should select the bundle size and type of packing best suited to their requirements and state it on the order):-

7.2.1 FYNPLAAT - GESNYDE LENGTES

7.2.1 SHEETS - CUT LENGTHS

TIPE VERPAKKING TYPE OF PACKING	VERPAKKINGS-KODE PACKING CODE	MATERIAAL WYDTE/MATERIAL WIDTH (mm)					
		600 - 1225				> 1225 - 1800	
		BONDELMASSA (TON) BUNDLE MASS (TONS)				BONDELMASSA (TON) BUNDLE MASS (TONS)	
		KODE CODE 03 1,25 t R.c.	KODE CODE 02 2,5 t R.c.	KODE CODE 10 4,0 t R.c.	KODE CODE 01 5,0 t R.c.	KODE CODE 10 4,0 t R.c.	KODE CODE 01 5,0 t R.c.
1. Standaard verpakking met waterdigte papier bedekking op: Standard packing with waterproof paper covering on:							
(i) Lengte glyplanke / Lengthwise skids	15	(a) 10-85	4-15	(b) 1-70	(c) 0-85	*	*
(ii) Lengte & dwarsglyplanke / Length & cross-wise skids	16	(a) 7-95	2-65	(b) 0-75	(c) 0-00	(b) 0-75	(c) 0-00
3. Kantbeskermde verpakking met waterdigte en roeswerende papier met skrotplaat bedekking op/ Edge protective packing with waterproof and rust preventative paper with scrap sheet covering on:							
(i) Lengte glyplanke/Length wise skids	25	(a) 12-55	5-00	(b) 2-15	(c) 1-20	*	*
(ii) Lengte en dwarsglyplanke / Length and cross-wise skids	26	(a) 10-50	4-05	(b) 1-50	(c) 0-75	(b) 1-80	(c) 0-85

* Nie beskikbaar

7.2.2 OPMERKINGS:

1. Vir diktes ⩽ 0,9 mm en oor 1 000 mm tot 1225 mm wyd is verpakkingskodes 05, 15 en 25 nie van toepassing nie. Vir hierdie groottes moet verpakkingskodes 06, 16 of 26 gespesifiseer word.
2. Vir bestelde hoeveelhede wat tussen die massas van twee standaardgroottebondels lê, is die ekstra vir die bondelgrootte met die hoër ekstra van toepassing.
3. Die Korporasie behou hom die reg voor om bondels te lewer waarvan die massa minder is as die bestelde massa, of om bondels te lewer tot 10% swaarder as die bestelde massa.
4. Min. plaatgrootte - (b) 0,9 m^2
   (c) 1,1 m^2
5. Bondelgroottes:
   (a) Bondelgroottes van 1,25 ton is nie beskikbaar nie t.o.v. trekkwaliteit, trekkwaliteit gestabiliseer, BS1449/1972 KCR 1, BS 1449/1972 RCR 2 en BS1449/1972 RCR 3.
6. Roes: Verwys bl 12 en S13 paragraaf 5.4 en 5.5.

* Not available

7.2.2 NOTES:

1. For thicknesses ⩽ 0,9 mm and over 1 000 mm to 1225 mm wide packing codes 05, 15 and 25 do not apply. For these sizes packing codes 06, 16 or 26 must be specified.
2. For ordered quantities which lie between the masses of two standard size bundles, the extra for the bundle size bearing the higher extra applies.
3. The Corporation reserves the right to supply bundles which may have a mass less than the ordered bundle mass, or have a mass up to 10% more than the ordered bundle mass.
4. Min. sheet size - (b) 0,9 m^2
   (c) 1,1 m^2
5. Bundle sizes:
   (a) Bundle sizes of 1,25 tons are not available i.r.o. drawing quality, drawing quality stabilised, BS 1449/1972 KCR 1, BS 1449/1972 RCR 2 and BS 1449/1972 RCR 3.
6. Rust: Refer page S12 en S13 paragraph 5.4 and 5.5.

8. HARDE ONUITGEGLOEIDE ROLLE
HARD UNANNEALED COILS

KODE CODE		
2410	8.1 Harde onuitgegloeide rolle met standaard wals-olie (ongeinspekteer en nie teruggesny na dikte) Aftrekking ..... R19-10 Beperking Wydtes 600-1800mm in rolle met 'n maks. massa van 12,5 kg/mm van wydte tot 'n maks. massa van 10 ton.	8.1 Hard unannealed coils with standard mill oil. (Uninspected and not cut back to thickness) Deduction ..... R19-10 Limitation Widths 600-1800mm in coils with a max. mass of 12,5 kg/mm of width up to a max. mass of 10 tons.
2413	8.2 Harde onuitgegloeide Smalband (25 tot onder 600mm wyd met standaard wals-olie) Aftrekking R19-10	8.2 Hard unannealed Slit Strip (25 to under 600mm widths with standard mill oil) Deduction ..... R19-10 ton
2414	8.3 Skoonmaak van harde onuitgegloeide rolle/ Smalband Ekstra R25-30	8.3 Cleaning of hard unannealed coils/ slit strip Extra R25-30
	8.4 Spesiale olie van harde onuitgegloeide rolle/Smalband ..... op aansoek.	8.4 Special oiling of Hard Unannealed coils Slit Strip ..... on application.
	8.5 VERPAKKINGS-EKSTRAS Rolle is beskikbaar tot 'n maksimum massa (uitgedruk in kg/mm van wydte) soos uiteengesit in die volgende tabel (klante moet vanaf die tabel die mees aanvaarbare rolgrootte vir hul behoeftes kies en dit op die bestelling spesifiseer.)	8.5 PACKING EXTRAS Coils are available to maximum mass (expressed in kg/mm of width) as set out in the following table (customers should select from the table and specify on the order the coil size most suited to their requirements).
3180	8.6 Oppervlakafwerking Oppervlakafwerking: Harde Onuitgegloede Gladde Oppervlaktekstuur (mikpunt) CLA 0,5 mikron maksimum Ekstra R0-00	8.6 Surface Finish Surface finish: Hard Unannealed Smooth Surface Texture (Aim) CLA 0,5 micron maximum. Extra R0-00

STANDAARDVERPAKKING/STANDARD PACKING

MASSA VAN AFSONDERLIKE ROLLE IN kg PER mm WYDTE / MASS OF INDIVIDUAL COILS IN kg PER mm WIDTH		KODE CODE	SMALBAND SLIT STRIP		FYNPLAAT IN ROLLE SHEET IN COILS	
MAKS.kg PER mm WYDTE / MAX. kg PER MM WIDTH	WYDTE BEPERKINGS / WIDTH LIMITATIONS		SONDER WIEGSTUKKE / WITHOUT CRADLES	* GEMONTEER OP WIEGSTUKKE / MOUNTED ON CRADLES	SONDER WIEGSTUKKE / WITHOUT CRADLES	* GEMONTEER OP WIEGSTUKKE / MOUNTED ON CRADLES
			KODE/CODE 08	KODE/CODE 09	KODE/CODE 08	KODE/CODE 09
			R.c.	R.c.	R.c.	R.c.
(a) 12,50	150 mm min.	30	0-00	1-50	0-00	1-50
6,25	75 mm min.	31	24-35	26-25	22-00	25-35
4,17	40 mm min.	32	29-80	34-60	25-55	30-35
3,13		33	35-50	41-70	28-80	35-25
2,50		34	41-20	49-05	32-60	40-10
2,08		35	46-80	66-40	35-90	45-15
1,79		36	-	-	39-40	50-35
1,56		37	-	-	42-85	55-20

OPMERKINGS:

(a) (i) Wydtes 150 - < 600 mm
Onderworpe aan bevestiging.

(ii) Rolle > 800 mm wyd - Rolmassa 10 ton maks.
Rolmassa kode 38 van toepassing.
* Wiegstukke is verpligtend vir Spoorversendings.

(iii) Vir wydtes >1225 mm:
Slegs kode 30, 31 en 32

SMALBAND
BONDELGROOTTE
Rolle word deur middel van bande in bondels gebind in groottes om by Werkepraktyk te pas.
GESPESIFISEERDE BONDELMASSA
..... Op aansoek

NOTES:

(a) (i) Widths 150 - < 600 mm
Subject to confirmation.

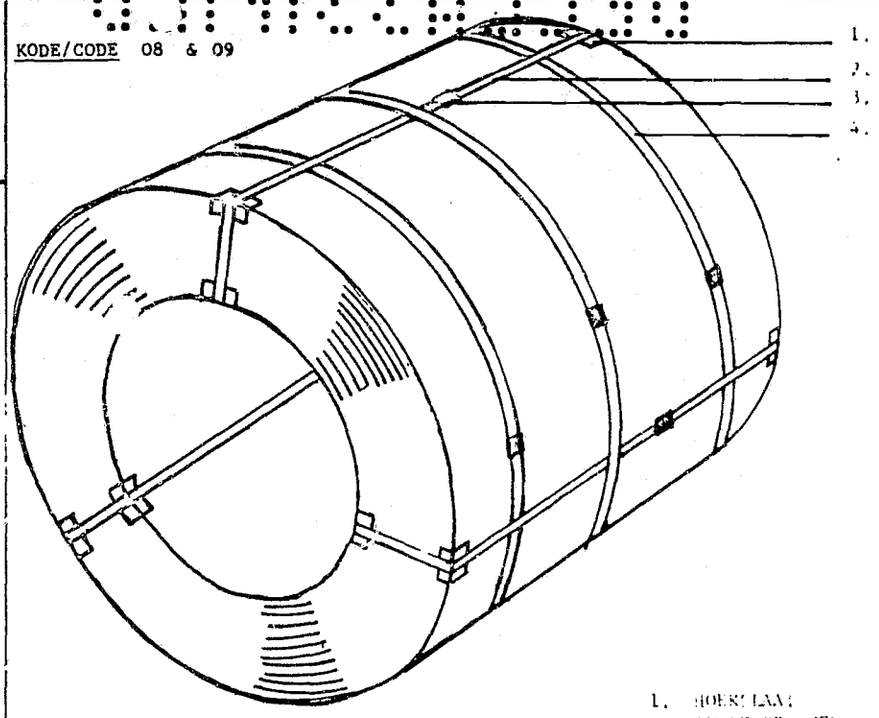
(ii) Coils > 800 mm wide - Coil mass 10 tons max.
Coil mass code 38 applies.
* Cradles are obligatory for Rail Transport.

(iii) For widths >1225 mm:
Only code 30, 31 and 32.

SLIT STRIP
BUNDLE SIZE
Coils are strapped together to form bundles to suit Works' Practice.
SPECIFIED BUNDLE MASS
..... On application.

YSKOR BEPERK ISCOR LIMITED

GEDEKLASSIFISEER

TIPE VERPAKKING/ PACKING TYPE	KODE/CODE 08 & 09
GEEN BESKERMING NO PROTECTION	

1. HOEKSTAAL
ANGLE BRACKET
2. OOGBANDE
EYES TIES
3. SEëLS
SEALS
4. OMTREKBANDE
CIRCUMFERENTIAL STRAPS

DEGRADED

1979.10.01

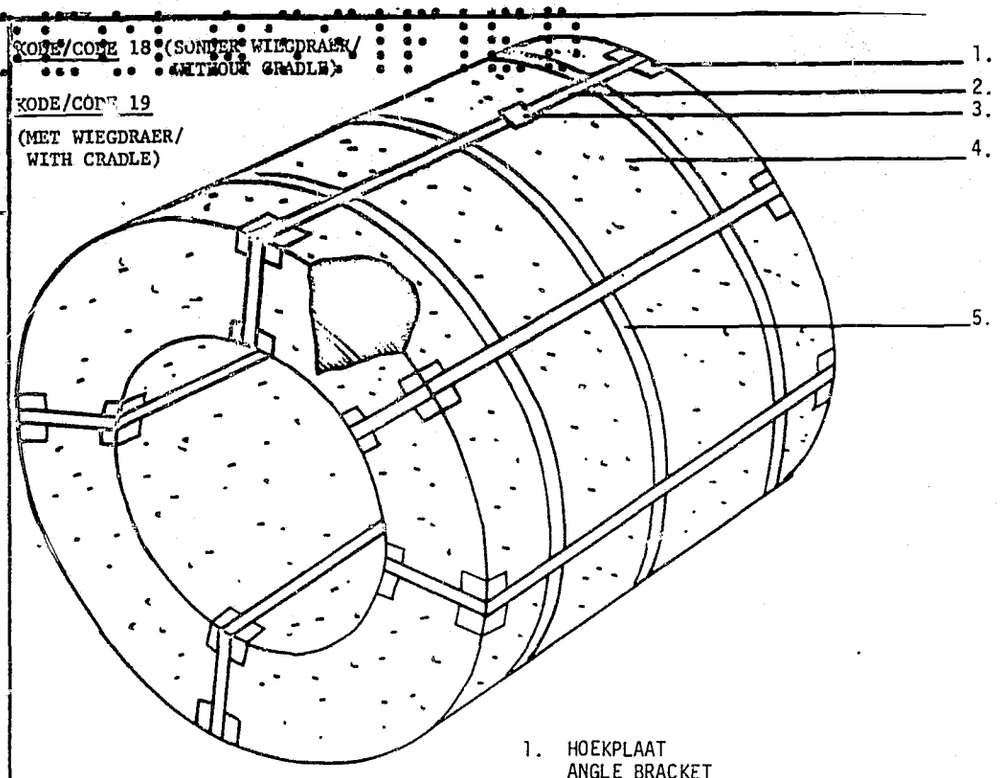
Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1978.09.15

TIPE VERPAKKING/
PACKING TYPE

KODE/CODE 18 (SONDER WIEGDRAER/
WITHOUT CRADLE)

KODE/CODE 19
(MET WIEGDRAER/
WITH CRADLE)

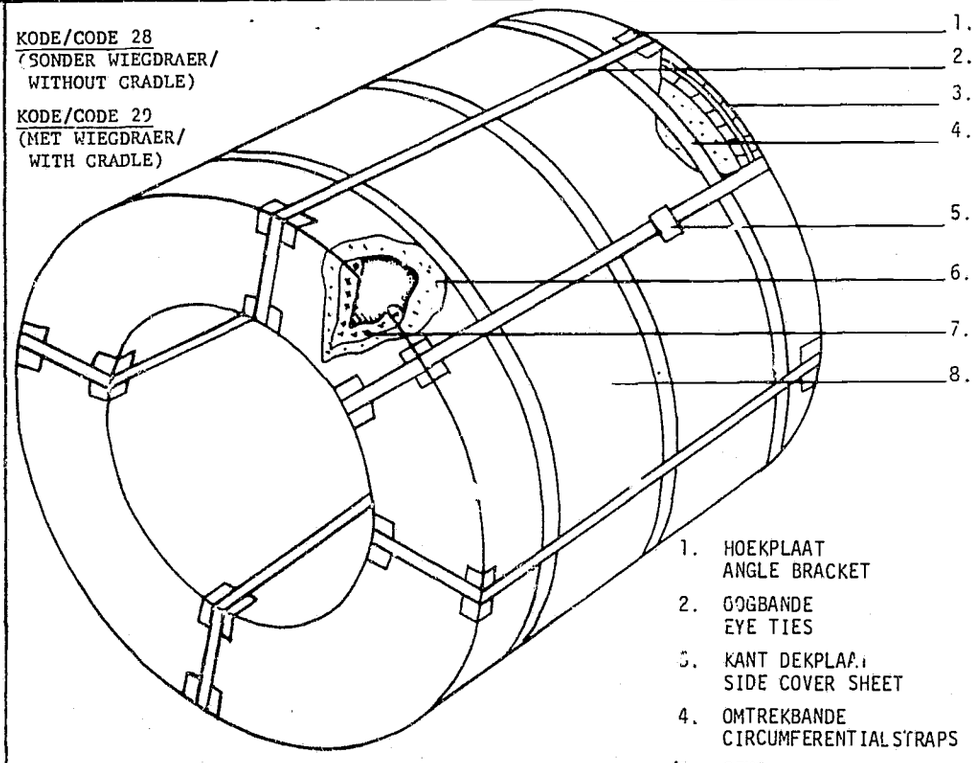


WATERDIGTE PAPIER/
WATERPROOF PAPER

1. HOEKPLAAT
ANGLE BRACKET
2. OOGBANDE
EYES TIES
3. SEëL
SEALS
4. WATERDIGTE PAPIER
WATERPROOF PAPER
5. OMTREKBANDE
CIRCUMFERENTIAL STRAPS

KODE/CODE 28
(SONDER WIEGDRAER/
WITHOUT CRADLE)

KODE/CODE 29
(MET WIEGDRAER/
WITH CRADLE)

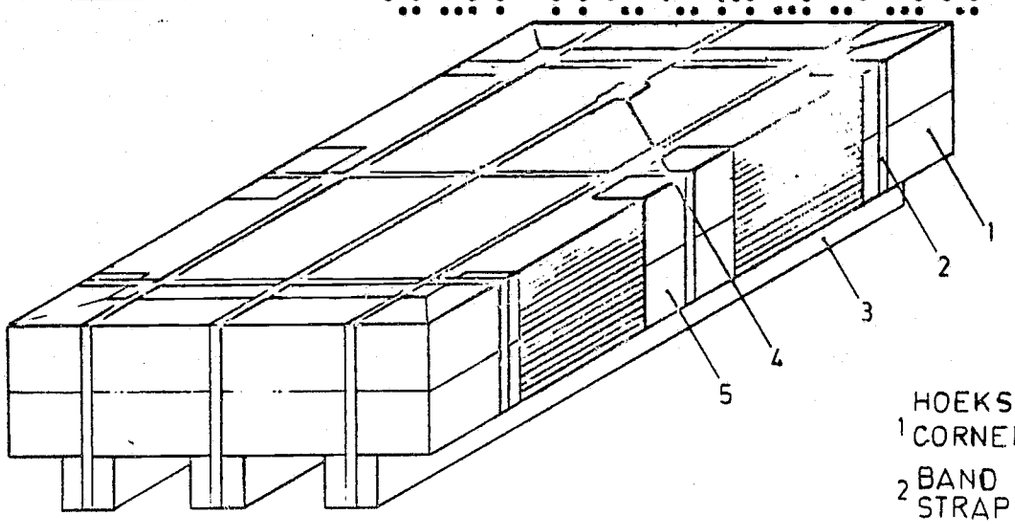


WATERDIGTE ROESWE-
RENDE PAPIER EN
SKROTPLAATBEDEKKING/
WATERPROOF RUST
PREVENTIVE PAPER AND
SCRAP PLATE COVERING

1. HOEKPLAAT
ANGLE BRACKET
2. OOGBANDE
EYE TIES
3. KANT DEKPLAAT
SIDE COVER SHEET
4. OMTREKBANDE
CIRCUMFERENTIAL STRAPS
5. SEëls
SEALS
6. WATERDIGTE PAPIER
WATERPROOF PAPER
7. ROESWERENDE PAPIER
RUST PREVENTIVE PAPER
8. DEKPLAAT

YSKOR BEPERK ISCOR LIMITED

KODE/CODE 05



1 HOEKSTUT
CORNER BRACKET

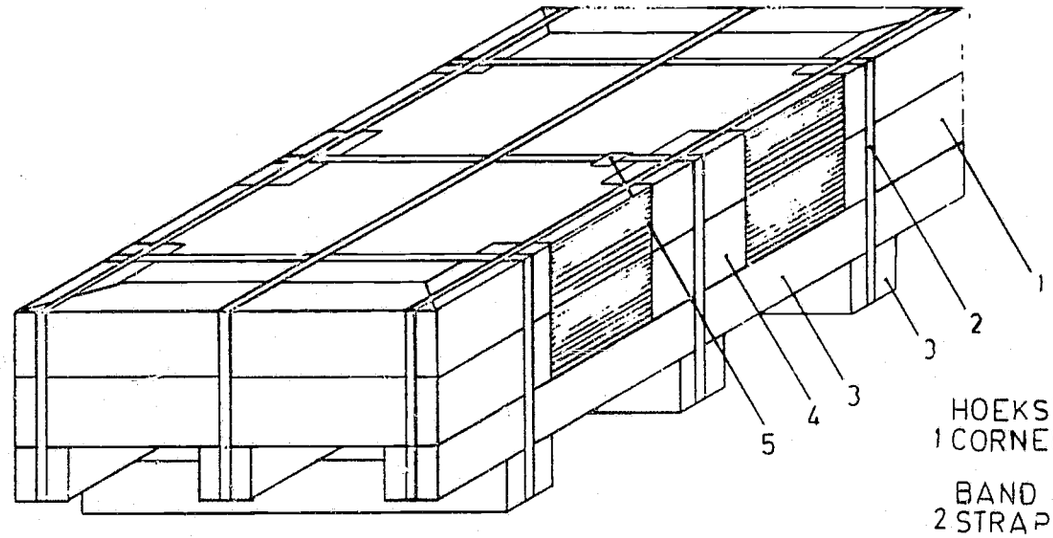
2 BAND
STRAP

3 GLYPLANKE
SKIDS

4 SEËLS
SEALS

5 HOEKPLAAT
ANGLE BRACKETS

KODE/CODE 06



1 HOEKSTUT
CORNER BRACKET

2 BAND
STRAP

3 GLYPLANKE
SKIDS

4 HOEKPLAAT
ANGLE BRACKET

5 SEELS
SEALS

DEGRADABLE

BESKERMING - PROTECTION

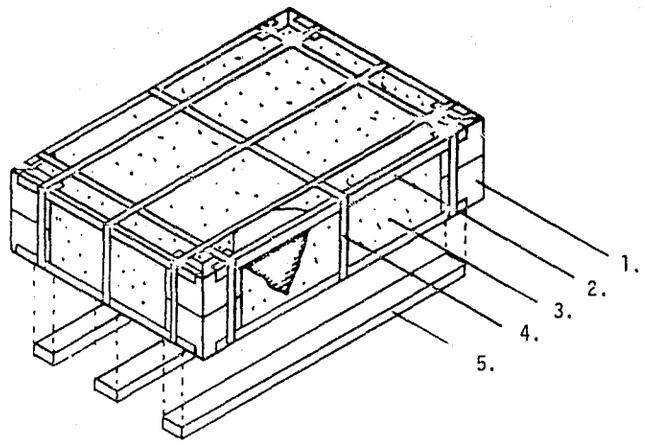
WATERDIGTE PAPIER WATERPROOF PAPER

GLYPLANKE SKIDS

LENGTE/LENGTHWISE

LENGTE EN DWARS/LENGTH - CROSSWISE

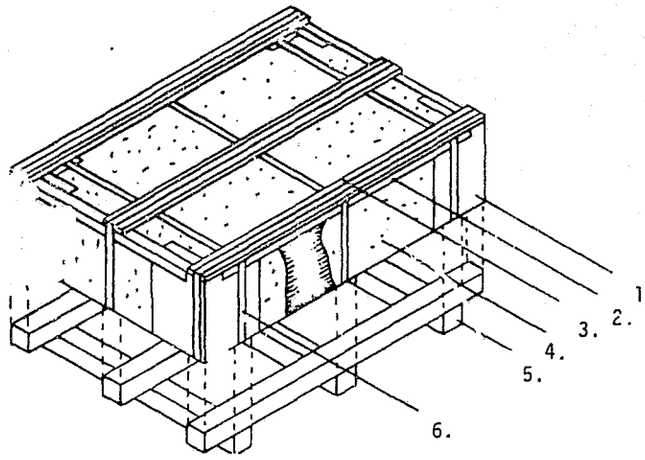
KODE/CODE 15



1. HOEKSTUT
   CORNER BRACKET
2. HOEKPLAAT
   ANGLE BRACKET
3. WATERDIGTE PAPIER
   WATERPROOF PAPER
4. BAND
   STRAP
5. GLYPLANKE
   SKIDS

BEPERKINGS/LIMITATIONS	
DIKTE THICKNESS (mm)	WYDTE WIDTH (mm)
≤ 0,7	600 ≤ L 000
≥ 0,9	600 ≤ 1 225

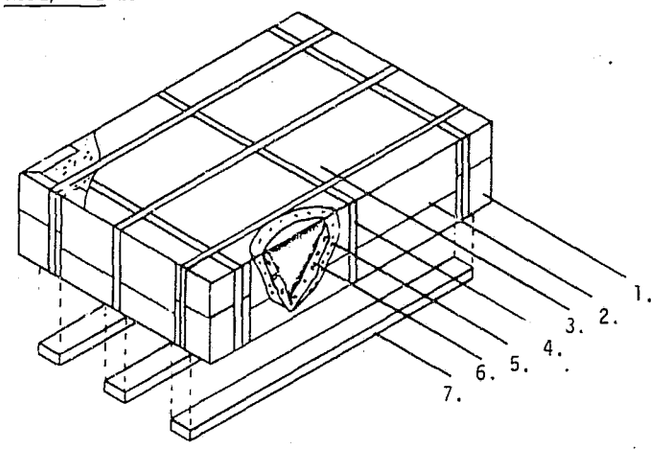
KODE/CODE 16



1. HOEKSTUT
   CORNER BRACKET
2. HOEKPLAAT
   ANGLE BRACKET
3. LENGTE PLANKIE
   LENGTHWISE PLANK
4. WATERDIGTE PAPIER
   WATERPROOF PAPER
5. GLYPLANKE
   SKIDS
6. BAND
   STRAP

WATERDIGTE ROESWERE DE PAPIER EN STAAL-PLAATBEDEKKING
WATERPROOF RUST PREVENTIVE PAPER AND SCRAP PLATE COVER

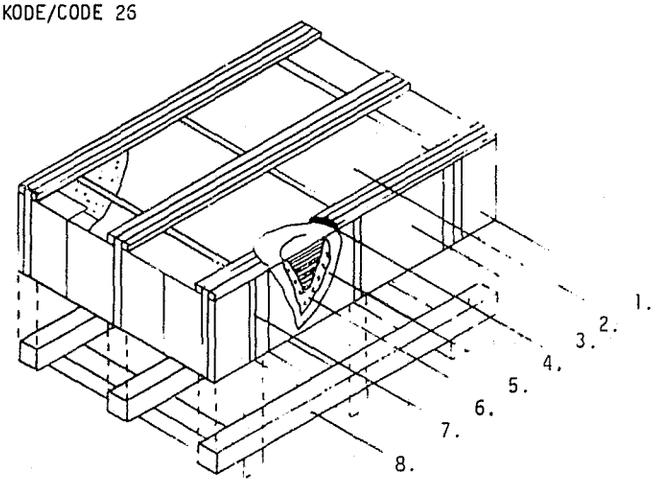
KODE/CODE 25



1. HOEKSTUT
   CORNER BRACKET
2. HOEKPLAAT
   ANGLE BRACKET
3. DEKPLAAT
   COVER SHEET
4. BAND
   STRAP
5. WATERDIGTE PAPIER
   WATERPROOF PAPER
6. ROESWERENDE PAPIER
   RUST PREVENTIVE PAPER
7. GLYPLANKE
   SKIDS

BEPERKINGS/LIMITATIONS	
DIKTE THICKNESS (mm)	WYDTE WIDTH (mm)
≤ 0,9	600 ≤ L 000
≥ 0,9	600 ≤ 1 225

KODE/CODE 26



1. HOEKSTUT
   CORNER BRACKET
2. DEKPLAAT
   COVER SHEET
3. HOEKPLAAT
   ANGLE BRACKET
4. LENGTE PLANKIE
   LENGTHWISE PLANK
5. WATERDIGTE PAPIER
   WATERPROOF PAPER
6. ROESWERENDE PAPIER
   RUST PREVENTIVE PAPER
7. BAND
   STRAP

KOUDGEWALSTE ROLLE/SMALBAND/FYNPLAAT — COLD-ROLLED COILS/SLIT STRIP/SHEETS

B STANDAARDVERVAARDIGINGSPRAKTYK
STANDARD MANUFACTURING PRACTICE

1. OMVANG / SCOPE

Koudgewalste Fynplaat bestaan uit die groep fynplaat wat verkry word deur warmgewalste fynplaat koud te reduseer na diktes van 2,00 mm tot 0,30 mm, gevolg deur uitgloeiing en temperwalsing. Koudgewalste fynplaat word normaalweg "soos gewals" voorsien d.i. die kant word gesny gedurende die skoonbytproses voor koudreduksie.
Koudgewalste smalband bestaan uit die groep koolstofsmalband wat gestrooksny is uit koudgewalste rolle soos hierbo beskryf.
Die beskikbare groottes is beperk tot die wat in die wydte- en dikte tabel voorkom (Verwys bladsy S2, par. 2.4)

Cold Rolled Sheets comprise that group of flat sheets obtained from hot rolled sheet by cold reducing to thicknesses from 2,00 mm to 0,30 mm, followed by annealing and temper rolling. Cold rolled sheet is normally supplied with a milled edge i.e. the edge is cut during the pickling process prior to cold reduction.
Cold rolled slit strip comprises that group of carbon strip which has been slit from cold rolled coils described above.
The available sizes are limited to those shown in the width and thickness table.
(Refer page S2, Par. 2.4)

2. KWALITEIT / QUALITY

2.1 Handelskwaliteit
Wanneer Handelskwaliteit Koudgewalste Smalband/Fynplaat bestel word, is die volgende analise en toetse, van toepassing.

2.1 Commercial Quality
When Commercial Quality Cold Rolled Slit Strip/Sheet is specified, the following analysis and tests are applicable.

2.2 Chemiese Analise
(Gietpotanalise)
Handelskwaliteit word gewoonlik vervaardig uit staal met 'n lae koolstofinhoud (0,15% maks.). Wanneer verlang kan Handelskwaliteit in 5-punt-koolstofreekse tot 0,15% maks. gelewer word, waarvoor ekstras gehef word - verwys bladsy P4, par. 4.1.
In elke geval sal 'n maksimum inhoud van 0,035% FOSFOR en 0,040% Swael van toepassing wees.

2.2 Chemical Analysis
(Ladle Analysis)
Commercial Quality is normally supplied in a low carbon steel (0,15% max.).
When required, Commercial Quality can be supplied in 5 point carbon ranges up to 0,15% carbon max. for which extras are charged - Refer page P4, par. 4.1.

In each case a maximum content of 0,035% Phosphorus and 0,040% Sulphur will apply.

2.3 Buigtoetse
Vir enige koolstofreeks wat nie die maksimum van 0,15% oorskry nie, behoort die toetsmonster by kamertemperatuur in enige rigting plat op sigself gebuig te kan word. Waar die koolstofreeks bo 0,15% is, maar nie 0,25% oorskry nie, behoort die toetsmonster by kamertemperatuur deur 'n boog van 180° in enige rigting om 'n dikte gelykstaande met dié van die toetsmonster gebuig te kan word. Daar behoort geen geredelik sigbare krake op enige gebuigde oppervlak sigbaar te wees nie. Krake op die gesnyde kante van die monster en growwe tekstuur word egter buite rekening gelaat.

2.3 Bend Tests
For any carbon range, the maximum of which does not exceed 0,15%, a test specimen should stand being bent flat on itself in any direction at room temperature. For any carbon range, the maximum of which is over 0,15% and not over 0,25%, a test specimen should stand being bent, at room temperature, through 180° in any direction around a thickness equal to that of the specimen. There should be no readily visible cracks along any bend, but cracks at sheared edges of the specimen and coarse grain are disregarded.

2.4 Grootereeks / Range of Sizes

FYNPLAAT / SHEETS						SMALBAND / SLIT STRIP
STANDAARD-DIKTES / STANDARD THICKNESS	BEREKENDE MASSA / CALCULATED MASS	WYDTE/WIDTH: ROLLE EN GESNYDE LENGTES / COILS AND CUT LENGTHS	LENGTE / LENGTH: HANDELSKWALITEIT EN STRUKTUUR GRADE/ COMMERCIAL QUALITY AND STRUCTURAL GRADES	TREK-, EMALJE- EN STABILISEERKWALITEITE[1])/DRAWING ENAMELLING AND STABILISED QUALITIES[1])	ALLE KWALITEITE/ ALL QUALITIES	WYDTE/ WIDTH
			WYDTES / WIDTHS: < 800 mm	< 800 mm	≥ 800 mm	
mm	kg/m²	mm	m	m	m	mm
2,00 1,80 1,60 1,40 1,20	16,078 14,470 12,862 11,255 9,647	600 tot/to 800	1,0 tot/to 5,0	1,0 tot/to 4,0	1,0 tot/to 5,0	25 tot/to 600
1,10 1,00	8,843 8,039		1,0 tot/to 4,3			
0,90	7,235	600 tot/to 1700		1,0 tot/to 3,35		
0,80 0,70	6,431 5,627	600 tot/to 1500				
0,60	4,823	600 tot/to 1350	1,0 tot/to 3,65	1,0 tot/to 3,0		
0,55 0,50	4,421 4,020	600 tot/to 1225		1,0 tot/to 2,5		25 tot/to 400
0,45 0,40	3,618 3,216	600 tot/to 1000	1,0 tot/to 2,5	1,0 tot/to 2,5	1,0 tot/to 2,5	
* 0,35 * 0,30	2,814 2,412		-	-	-	

* Rolle alleenlik.

ROLLE: Binnediameter ongeveer 510 mm.

(1) Sien kwaliteit- en grootte-ekstra tabelle vir beperkings op diktes.

* Coils only.

COILS: Inside diameter approximately 510 mm.

(1) See quality and size extra tables for restrictions on thicknesses.

3. TOLERANSIES/BONDELS / TOLERANCES/BUNDLES

3.1(a) Koud-Gewalste Fynplaat/Smalband word gewals in millimeter diktes.

(b) Die normale digtheid van staal vir 1 vierkante meter van 1 mm dik = 7,85 kg.
Koudgewalste Fynplaat/Smalband word verkoop teen 'n prys per ton.
Om massa vanaf dikte te bereken moet kroon en oor toleransies op wydte en en lengte in berekening gebring word en dan is die basis van berekening:
1 vierkante meter van 1 millimeter dik = 8,039 kg.

3.1(a) Cold Rolled Sheet/Slit Strip are rolled to millimeter thicknesses.

(b) The normal density of steel 1 square meter of sheet 1 mm thick = 7,85 kg.

Cold Rolled Sheet/Slit Strip is sold on a price per ton basis.
To convert mass from thickness taking into account crown and over tolerance on width and length the following formula applies.

1 square meter of sheet 1 millimeter thick = 8,039 kg.

DECREASED

3. TOLERANSIES/BONDELS (VERVOLG)/ TOLERANCES/BUNDLES (CONTINUED)

3.2 Massatoleransie

(Gesnyde lengtes alleenlik)
Massatoleransies vir fynplaat van een dikte en grootte in die volgende tabel is van toepassing op besendings of gedeelte daarvan na een bestemming. (In een of meer besendings of gedeelte daarvan, is die toleransie vir daardie spesifieke massa van toepassing):-

3.2 Mass Tolerance

(Cut lengths only)
Mass tolerances for sheets of one thickness and size in the following table apply to consignments or portion of consignments to one destination. (In one or more consignments or any portion of one consignment, the tolerance for that particular mass applies):-

MASSA (TON) / MASS (TONS)	MASSATOLERANSIES/ MASS TOLERANCES	
	1,1 mm DIK/ 1,1 mm THICK	1,1 mm EN DUNNER/ 1,1 mm AND THINNER
	%	%
1 - 3	± 6,0	± 8,0
> 3 - 5	± 5,0	± 7,0
> 5 - 15	± 5,0	± 5,5
> 15 - 25	± 4,5	± 5,0
> 25	± 4,0	± 4,5

3.3 Diktetoleransies

3.3 Thickness Tolerances

3.3.1 Rolle, Smalband en Gesnyde Lengtes

3.3.1 Coils, Slit Strip and Cut Lengths

GESPESIFISEERDE DIKTE (mm) / SPECIFIED THICKNESS (mm)			
* DIKTETOLERANSIES IN mm BO (+) EN ONDER (-)/ * THICKNESS TOLERANCES IN mm OVER (+) AND UNDER (-)			
> 1,4 TOT/TO 2,0	1,0 TOT/TO 1,4	0,50 TOT/TO < 1,0	0,35 TOT/TO < 0,5
± 0,13	± 0,10	± 0,08	± 0,05

* Diktes word gemeet by enige punt op die plaat minstens 20 mm van 'n kant af.

* Thicknesses are measured at any point on the sheet not less than 20 mm from a side edge.

3.4 Wydtetoleransies (Smalband 25 - < 600 mm)

Die volgende afwykings op gespesifiseerde wydtes is toelaatbaar:

3.4 Width Tolerances (Slit Strip 25 - < 600 mm)

The following variations on specified widths are allowed.

WYDTES mm/WIDTHS mm			
> 25* - 225	225 - < 300	300 - < 500	500 - < 600
AFWYKINGS BO (+) EN ONDER (-) / VARIATIONS OVER (+) AND UNDER (-)			
0,20	0,30	0,70	1,00

Opmerking:
* Vir 25 mm wydte is die toleransie -0+1 mm.

Note:
* For 25 mm width the tolerance will be -0+1 mm.

3 TOLERANSIES/BONDELS (VERVOLG) / TOLERANCES/BUNDLES (CONTINUED)

3.5 **Wydte- en Lengtetoleransies** (Fynplaat/Rolle 600 mm) (nie haaksgesny nie)

3.5 **Width and Length Tolerances** (Sheets/Coils 600 mm) (not resquared)

WYDTE/WIDTH		LENGTE/LENGTH	
GESPESIFISEERDE WYDTE/SPECIFIED WIDTH	TOLERANSIE BO GESPESIFISEERDE WYDTE/TOLERANCE OVER SPECIFIED WIDTH	GESPESIFISEERDE LENGTE/SPECIFIED LENGTH	TOLERANSIE BO GESPESIFISEERDE LENGTE/TOLERANCE OVER SPECIFIED LENGTH
600 - 750	3	< 1 500	6
> 750 - 1 225	5	1 500 - 2 400	13
>1 225 - 1 525	6	>2 400 - 3 500	19
>1 525 - 1 800	8	>3 500 - 4 000	25
		>4 000 - 5 000	32
		>5 000 - 6 000	38

Opmerking:
Wydte- en lengtetoleransie niks onder nie.

3.6 **Kromtingtoleransies**
Kromming is die grootste afwyking tussen 'n snykant en 'n reguit lyn, gemeet met 'n rei tussen die uitholkant en 'n reguit lyn.

3.6.1 **Rolle** (⩾ 600 mm wyd)
25 mm in enige 6000 mm

3.6.2 **Smalband**
>300 - < 600 mm wyd - 25 mm in enige 6000 mm.
⩽300 mm wyd - 6 mm in enige 2500 mm.

3.6.3 **Gesnyde Lengtes** (Nie haaksgesny nie)
0,4% x Lengte

Note:
Width and length tolerance nothing under.

3.6 **Camber Tolerances**
Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straight edge.

3.6.1 **Coils** (⩾ 600 mm wide)
25 mm in any 6000 mm

3.6.2 **Slit Strip**
>300 - < 600 mm wide - 25 mm in any 6000 mm.
⩽300 mm wide - 6 mm in any 2500 mm.

3.6.3 **Cut Lengths** (Not resquared)
0,4% x Length

DECLASSIFIED

3.7 Nie-haaks-toleransie (Gesnyde Lengtes)
(Nie haaksgesny nie)
Nie-haaks is die grootste afwyking tussen 'n kant en 'n reguit lyn wat reghoekig loop vanuit een hoek. Dit kan ook verkry word deur die verskil in oorhoeksmate te meet. Die nie-haaks-afwyking is die helfte van die verskil. Die toleransie vir fynplaat van alle diktes en alle groottes is 1,0% van die wydte.

3.8 Toleransies vir haaksgesnyde fynplaat
(Gesnyde lengtes)
Die afsonderlike toleransies vir oor-wydte, oor-lengte, kromming of nie-haaks is soos volg:-

3.7 Out-of-square tolerance (Cut Lengths)
(Not resquared)
Out-of-square is the greatest deviation of an edge from a straight line at right angles to a side and touching one corner. It is also obtained by measuring the difference between the diagonals of the sheet. The out-of-square deviation is one half of the difference. The tolerance for sheets of all thicknesses and all sizes is 1,0% of the width.

3.8 Resquared sheet tolerances
(Cut lengths)
The individual tolerances for overwidth, overlength, camber or out-of-square are as follows:-

MAKS. LENGTE 4 550 mm MAX. LENGTH	MAKS. WYDTE 1 800 mm MAX. WIDTH
LENGTE/LENGTH (mm)	TOLERANSIE (mm) TOLERANCE (mm)
⩽ 3 000	+ 1,5
> 3 000	+ 3,0

Opmerking:
Wydtetoleransie niks onder nie.

Note:
Width tolerance nothing under.

3.9 Platheidstoleransies (Gesnyde Lengtes)
(a) Platrig nie gespesifiseer

3.9 Flatness Tolerances (Cut Lengths)
(a) Levelling not specified

DIE MAKSIMUM AFWYKING VAN 'N HORISONTALE PLAT OPPERVLAK THE MAXIMUM DEVIATION FROM A HORIZONTAL FLAT SURFACE		
GESPESIFISEERDE DIKTE (mm) SPECIFIED THICKNESS (mm)	GESPESIFISEERDE WYDTE (mm) SPECIFIED WIDTH (mm)	PLATHEIDSTOLERANSIE (mm) FLATNESS TOLERANCE (mm)
> 1,1	600 - 900	6
	> 900 - 1 525	10
	>1 525 - 1 800	16
⩽ 1,1	600 - 900	10
	> 900 - 1 525	16
	>1 525 - 1 800	23

Opmerking:
Wanneer fynplaat in lengtes gesny word, word dit platgedruk deur kragtige rolrigters wat deel uitmaak van ons snyproses. Tensy klante oor soortgelyke rolriggeriewe beskik moet hulle nie verwag om dieselfde platheidstoleransie te behaal indien fynplaat in lengtes uit rolle gesny word nie.

Note:
When cut lengths are processed, the sheets are flattened by powerful levellers which form part of the shearing line. Unless customers have similar levelling facilities, they should not expect sheets, cut by themselves from coils, to meet our flatness tolerances.

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3.9 Platheidstoleransies (Vervolg)
(b) Platrig gespesifiseer

3.9 Flatness Tolerances (Continued)
(b) Levelling specified

DIE MAKSIMUM AFWYKING VAN 'N PLAT OPPERVLAK/
THE MAXIMUM DEVIATION FROM A FLAT SURFACE

GESPESIFISEERDE DIKTE (mm) SPECIFIED THICKNESS (mm)	GESPESIFISEERDE WYDTE (mm) SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE (mm) SPECIFIED LENGTH (mm)	PLATHEIDSTOLERANSIES (mm) FLATNESS TOLERANCES (mm)
⩾ 0,70	⩽ 1 225	⩽ 3 000	3
		> 3 000	6
	⩽ 900	⩽ 3 000	6
		> 3 000	10
< 0,70	> 900 - 1 225	⩽ 3 000	10
		> 3 000	10

3.10 Ander Kwaliteite as Handelskwaliteite
Tensy anders ooreengekom, word ander kwaliteite as Handelskwaliteite in ooreenstemming met die vereistes van die betrokke spesifikasie voorsien.
Opmerking:
Wanneer koudgewalste fynplaat volgens dikte toleransies volgens BS, ASTM, DIN, JIS of ander ter saaklike spesifikasies voorsien word, sal die dikte gemeet word op enige plek op die plaat nie minder as 20 mm van die kant af.

3.10 Qualities other than commercial Qualities
Unless otherwise agreed upon, qualities other than Commercial Qualities are supplied in accordance with the requirements of the relevant specification.
Note:
When supplying cold rolled sheet to thickness tolerances as per BS, ASTM, DIN, JIS or any other relevant specifications, the thickness shall be measured at any point on the sheet not less than 20 mm from a side edge.

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4. ALGEMEEN / GENERAL

4.1 Oormaat of Ondermaat

Vir elke item van 'n bestelling behou ons ons die reg voor om materiaal te voorsien binne die toleransies soos hieronder aangedui:-

MASSA VAN BESTELDE ITEM (TON)	OORMAAT (+) ONDERMAAT (-)
MASS OF ORDERED ITEM (TONS)	OVERAGE (+) UNDERAGE (-)
	TON
2 - < 5	+ 1 - 1
5 - < 10	+ 2 - 3
10 - < 20	+ 3 - 4
20 - < 40	+ 4 - 5
40 - < 100	+ 4 - 6
⩾ 100	+ 6 -10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Vir beperkings op bogenoemde toleransies verwys bls. P1, par. 2.2.

4.1 Overage or Underage

For each item on an order we reserve the right to supply within the tolerances given below:-

Where a minimum or maximum quantity is specified, the overage or underage will be the total of the applicable plus and minus tolerance.
For restrictions on the above tolerances - refer page P1, par. 2.2.

4.2.1 Saambind in Bondels

(a) Gesnyde Lengtes

Fynplaat word behoorlik deur middel van bande om bondels van die volgende groottes gebind:-

(i) Vir wydtes 1225 mm
Ongeveer 1,25 ton
Ongeveer 2,5 ton
Ongeveer 4 ton
Ongeveer 5 ton

(ii) Vir wydtes 1225 mm
Ongeveer 4 ton
Ongeveer 5 ton

Die klant se naam en versendingsadres word op die boonste plaat van elke saamgestelde bondel aangebring.
Wanneer bondelgroottes van 1,25 en 2,5 ton bestel word vir versending na 'n klant, behou ons ons die reg voor om 'n aantal kleiner bondels saam te bind in een gesamentlike bondel van ongeveer 5,00 ton. In sulke gevalle word die klant se naam en versendingsadres slegs op die boonste bondel aangebring, terwyl die kleiner bondels so gemerk word dat dit maklik met die boonste bondel vereenselwig kan word. Klante moet op die bestelling aandui indien hulle enige probleme ondervind met hierdie saamgestelde bondels.

(b) Rolle

Fynplaat in rolle word stewig met bande gebind.
Rolle word in groepe saam geweeg, en die gemiddelde massa bepaal deur die getal, is nie noodwendig die werklike massa van enige individuele rol nie.

4.2.1 Bundling

(a) Cut Lengths

Sheets are packed in bundles suitably tied by means of bands, in the following sizes:-

(i) For widths 1225 mm
Approximately 1,25 tons
Approximately 2,5 tons
Approximately 4 tons
Approximately 5 tons

(ii) For widths 1225 mm
Approximately 4 tons
Approximately 5 tons

The customer's name and consignment address are indicated on the top sheet of each composite bundle.
When bundle sizes of approximately 1,25 and 2,50 tons are ordered for dispatch to one customer, we reserve the right of making up composite bundles up to approximately 5,00 tons by strapping together a number of the smaller bundles. In such cases the customer's name and consignment address are indicated on the top bundle only and each of the smaller bundles is marked so as to associate it with the top bundle. Customers should indicate on the order if any difficulties are experienced with composite bundels.

(b) Coils

Sheets in coils are securely strapped with bands.
Coils are weighed in groups, and the mass of the group averaged over the number of coils. This average mass is not intended to be the actual mass of any individual coil.

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4. ALGEMEEN (VERVOLG)/GENERAL (CONTINUED)

4.2.1 Saambind in bondels (Vervolg)

(c) Smalband in Rolle

(i) Enkelrolle of bondels-rolle kan vir vervoerdoeleindes met staalband saamgebind word in saamgestelde stelde bondels-rolle. Die staalbande wat sulke saamgestelde bondels bind, kan deur die geadresseerde vir aflaaidoeleindes gesny word.

(ii) Bondels-rolle word geweeg, en uit die getal rolle per bondel word 'n gemiddelde massa per rol bepaal. Die gemiddelde massa is nie noodwendig die werklike massa van enige rol nie.

4.2.2 Merking

(a) Gesnyde Lengtes

Die boonste plaat van elke bondel word gemerk met die graad- of kwaliteitsimbool, dikte, lengte, wydte en benaderde getal plate in die bondel.

(b) Rolle

Die kwaliteit, wydte en dikte word op elke rol aangebring.

(c) Smalband

Elke bondel rolle word gemerk met die kwaliteit, wydte en dikte.

Opmerking:

Wanneer 'n analisesertifikaat of 'n analise- en toetssertifikaat vereis word, sal die 'gietnommer' op die bondel/rol aangetoon word.

4.3 Massa van Rolle

Bestellings vir rolle met 'n gespesifiseerde presiese massa word nie aanvaar nie. Rolle kan bestel word tot 'n gespesifiseerde maksimum massa volgens bladsye P9 en P10. Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word sal versending van die bestelling soos volg geskied:

(a) Minstens 80% in volmassarolle.

(b) Hoogstens 20% in ligmassarolle.

'Volmassarolle'

Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, word rolle met 'n massa van minstens 65% van daardie maksimum massa gelewer.

'Ligmassarolle'

Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, is 'ligmassarolle', rolle met 'n massa van minder as 'volmassarolle' maar met minstens 25% van die maksimum massa, hetsy gespesifiseer of omgereken.

4.2.1 Bundling (Continued)

(c) Slit Strip in Coils

(i) Individual or bundles of coils may be strapped together to form composite bundles of coils for transporting purposes. Bands securing such composite coils can be cut by consignees for off-loading purposes.

(ii) Coils are weighed in bundles and the mass averaged over the number of coils in the bundle. This average mass is not intended to be the actual mass of any individual coil.

4.2.2 Marking

(a) Cut Lengths

The top sheet of each bundle will be marked to indicate grade or quality symbol, thickness, length, width and approximate number of sheets.

(b) Coils

Each coil is marked with the quality width and thickness.

(c) Slit Strip

Each bundle of coils is marked with the quality, width and thickness.

Note:

When an analysis certificate or analysis and test certificate is required, the 'Cast number' will be indicated on the bundle/coil.

4.3 Mass of Coils

Orders for coils to a specific exact mass are not accepted. Coils may be ordered with a specific maximum mass in accordance with pages P9 and P10. When coils are ordered to a specified maximum mass, the order is despatched as follows:

(a) Not less than 80% in full mass coils.

(b) Not more than 20% in light mass coils.

'Full Mass Coils'

When coils to specified maximum mass are ordered, then coils are supplied with a mass of not less than 65% of that maximum mass.

'Light Mass Coils'

When coils are ordered to a specified maximum mass, then 'Light Mass Coils' are coils with a mass of less than 'Full Mass Coils' but not less than 25% of the maximum mass specified or converted.

5. PRODUKINLIGTING/PRODUCT INFORMATION

5.1 Oppervlakafwerking

(Verwys ook na bl. P6 paragraaf 5.6)

Koudgewalste materiaal is beskikbaar in die volgende oppervlakafwerkings, en klante moet duidelik op die bestelling aandui watter oppervlakafwerking verlang word, met vermelding van die eindgebruik.

Die gespesifiseerde oppervlakafwerking vir Koudgewalste materiaal word slegs vir een kant gewaarborg.

Gesnyde lengtes

Die bokant, soos verpak, sal die gespesifiseerde kant wees.

Rolle

Die gespesifiseerde kant sal met 'n plakstrook aangedui word.

5.1.1 Mat afwerking - aldoelaanwendings

Dit is die handelskwaliteitkategorie en is nie gewaarborg teen oppervlakimperfeksies en diskontinuiteite nie, maar is nogtans van goeie voorkoms en vry van defekte wat onooglik of opvallend of wat nadelig is vir die eindgebruik of wat meer as toevallig dikwels voorkom. Dit word in gesnyde lengtes of rolle gelewer.

Oppervlaktekstuur (mikpunt)

C.L.A. 0,8 - 2,0 micron

P.P.I. 90 minimum

5.1 Surface Finish

(Refer also to page P.6 paragraph 5.6)

Cold-rolled material is available in the following surface finishes, and customers should state clearly on the order which surface finish is required, and also indicate the end use.

The specified surface finish for Cold-rolled material is guaranteed for one one side only.

Cut lengths

The upper side, as packed will be the specified side.

Coils

The specified side will be indicated by means of a sticker.

5.1.1 Matt finish - general purpose applications

This is the commercial quality category and is not guaranteed against surface imperfections and discontinuities but is nevertheless of good appearance and free from defects which are unsightly or conspicuous or are detrimental to the end use or which occur in more than random frequency. These are supplied in cut lengths or coils.

Surface texture (aim)

C.L.A. 0,8 - 2,0 micron

P.P.I. 90 minimum

Tipiese aanwendings:
Emmers, baddens, uitlaatstelsels, brandblussers en algemene fynplaatmetaalwerk.

5.1.2 Mat afwerking - nie-blootgestelde trek- en persaanwendings. (Hierdie oppervlak is slegs van toepassing op trekkwaliteite)
Hierdie klassifikasie kan gebruik word vir nie-blootgestelde aanwendings waar vorkoms nie belangrik is nie en waar die oppervlaktekstuur taamlik grof is om olieretensie vir smering gedurende trek- of perswerk te verseker.
Minder ernstige oppervlakdefekte is toelaatbaar, behalwe dié wat die voorkoms van die finale produk nadelig mag beïnvloed.

Die oppervlaktekstuur sal nie in 'n groot mate van die eenvormige tekstuur van die produk afwyk nie.
Dit word in gesnyde lengtes of rolle gelewer.
Oppervlaktekstuur (mikpunt)
CLA 1,2 - 2,0 micron
PPI 90 minimum
Tipiese aanwendings:
Motorbinnepanele, wielnisse, enginmonterings en steune.

5.1.3 Mat-afwerking - Blootgestelde algemene aanwendings
Hierdie oppervlakkwaliteit is 'n mat afwerking waaraan laer eise gestel word as in die geval van 'mat afwerking - blootgestelde buiteaanwendings', maar dit is nogtans in die algemeen vry van die diskontinuïteite en ander imperfeksies wat die voorkoms na verwing of litografering nadelig beïnvloed.
Hierdie kwaliteit verseker 'n oppervlakafwerking wat geskik is vir buiteaanwendings, behalwe in gevalle waar die hoogste eise gestel word.
Etlike klein defekte sal teenwoordig wees maar sal nie onooglik of opvallend wees nie en sal nie die normale afwerking belemmer nie.
Die materiaal word in gesnyde lengtes en rolle gelewer.
Oppervlaktekstuur (mikpunt):
CLA 0,8 - 2,0 micron
PPI 90 minimum
Tipiese aanwendings:
Drom rompe en ente, staalmeubels en klein motorpanele.

5.1.4 Mat afwerking - blootgestelde buiteaanwendings (verbeterde oppervlakafwerking)
Dit is 'n klassifikasie met 'n verbeterde oppervlakafwerking wat 'n mat afwerking met 'n fyn skerp tekstuur vertoon. Dié materiaal is aan die een kant geïnspekteer (bokant) en is geskik vir 'n hoëglansverfafwerking. Die oppervlak sal in die algemeen vry wees van defekte, alhoewel daar etlike klein imperfeksies teenwoordig sal wees, wat 'n mate van metaal-afwerking sal vereis. Defekte op die onderste oppervlak kan verwag word, maar dit sal van so 'n aard wees dat dit nie die boonste, suiwerder oppervlak sal binnedring nie en dit sal ook nie van die tipe wees wat die fabriseringsproses sal belemmer nie.
Dié materiaal word in slegs gesnyde lengtes gelewer.

Surface texture (aim)
CLA 0,8 - 1,2 micron
PPI 100 minimum
CLA 1,3 - 1,6 micron
PPI 120 minimum
Tipiese aanwendings:
Motorbuitepanele en koelkasomhulsels.

5.1.5 Plateerafwerking - Algemene plateer-aanwendings
Dit is 'n gladde oppervlakafwerking wat verkry word deur middel van temperwalsing met gladde walse eerder as met haelbestraalde walse.

Typical applications:
Buckets, baths, exhaust systems, fire extinguishers and general sheet-metal work. the final product.

5.1.2 Matt finish - unexposed drawing and pressing applications. (This surface is only applicable to drawing qualities)
This classification can be used for non-exposed applications where appearance is not important and where the surface texture is rather rough, in order to ensure oil retaining for lubrication during drawing or pressing operations. Surface defects of moderate severaty are permissible except those which may affect the appearance of the final product.
The surface texture will not vary greatly from uniform texture of the product.
It is supplied in cut lengths or coils.

Surface texture (aim)
CLA 1,2 - 2,0 micron
PPI 90 minimum
Typical applications:
Automobile inner panels, wheel housings, engine mountings and brackets.

5.1.3 Matt finish-exposed general applicatins
This surface quality is a matt finish, which although less demanding than 'matt finish - exposed exterior applications', will still be generally free from discontinuities and other imperfections which will affect the appearance after painting or litho graphing.
This quality ensures a surface finish suitable for exterior applications, except for the most demanding. Some minor defects will be present but will not be unsightly or conspicuous and will not interfere with normal finishing operations.
The material is supplied in cut lengths and coils.

Surface texture (aim):
CLA 0,8 - 2,0 micron
PPI 90 minimum
Typical applications:
Drum bodies and ends, steel furniture and small automobile panels.

5.1.4 Matt finish - exposed exterior applications (improved surface finish)
This is an improved surface finish classifi-cation having a matt finish with a fine sharp texture. This material is one side inspected (top side) and is suitable for a high gloss paint finih. The surface will be generally free from defects, although there will be some minor imperfections which will require some metal finishing. Defects on the bottom surface can be expected but these will be of such a nature that they will not penetrate the superior surface nor will they be of a type which will hinder the fabrication process.

This material is supplied in cut lengths only. Oppervlaktekstuur (mikpunt)

CLA 0,8 - 1,2 micron
PPI 100 minimum
CLA 1,3 - 1,6 micron
PPI 120 minimum
Typical applications:
Automobile exterior panels and refrigerator casings.

5.1.5 Plating Finish - General plating applications
This is a smooth surface finish which is obtained by temper rolling with smooth rolls rather than with blast rolls.

Dit is geskik vir die elektroplateer van artikels waarvan die oppervlak effens beskadig is gedurende vormingswerk en wat derhalwe aansienlike metaal= afwerking benodig. Dit is ook geskik vir herwalsing wanneer mat afwerking onwenslik is. Die materaal word in gesnyde lengtes of rolle gelewer. Die gespesifiseerde kant is vry van defekte wat vervormingswerk sal hinder.

Oppervlaktekstuur (mikpunt)
CLA 0,5 mikron, maksimum
Tipiese aanwendings:
Stampers, skarniere, deurslotte en artikels wat platering benodig.

5.1.6 Kritiese plateerafwerking - kritiese plateer= aanwendings
Die materiaal word slegs in gesnyde lengtes gelewer. Dit is die een kant geïnspekteer, dit wil sê die bo-oppervlak en is gewaarborg teen oppervlakimperfeksies en diskontinuïteite, wat tot oormatige slyp- en poetswerk kan lei. Hierdie kwaliteit is geskik vir geëlektroplateerde artikels waaraan die hoogste eis gestel word en wat 'n minimum metaal afwerkng sal vereis.

Oppervlaktekstuur (mikpunt):
CLA 0,3 mikron, maksimum
Tipiese aanwendings:
wieldoppe, sierringe, spieëlomhulsels, huishoude= like toestelle, tafelgerei, ensovoorts.

5.1.7 Hoë mat afwerking - van toepassing op glasuuremaljering en kabelpantserband kwaliteit
Dit is 'n growwe afwerking en is geskik vir glasuuremaljering. Dit word gelewer wanneer 'glasuuremaljering of trek en emaljering' op die bestelling gespesifiseer word.
Die materiaal sal vry wees van defekte wat nie verwyder kan word tydens byting en was voor emaljering nie, defekte wat diskontinuiteit in die geëmaljeerde oppervlak kan veroorsaak en defekte wat blasies kan veroorsaak. Dit is nie teen sakbestandheid gewaarborg nie.

Oppervlaktrekstuur (mikpunt)
CLA 1,5 - 3,0 mikron
PPI 90 minimum
Tipiese aanwendings:
Potte, panne, stowe, baddens, kabelpant= seerband, ensovoorts.

5.1.8 Algemeen
Bogenoemde gespesifiseerde CLA- en PPI-reekse moet as mikpunte beskou word, afskoon alle pogings aangewend sal word om aan bogenoemde standaarde te voldoen.
Aangesien die lesings op dieselfde fynplaat aansienlik verskil, sal dit moeilik wees om hierdie standaarde te waarborg.

It is suitable for electroplating of articles of which the surface is slightly damaged during forming operations and which will therefore require a considerable amount of metal finishing. It is also suitable for re-rolling when a matt finish is undersir= able. The material is supplied in cut lengths or coils. The specified side is free from defects which will hinder the forming operations.
Surface texture (aim)
CLA 0,5 micron, maximum
Typical applications:
Bumpers, hinges, door locks and articles requiring plating.

5.1.6 Critical plating finish - critical plating applications
The material is supplied in cut lengths only. It is one-side inspected, i.e. the top surface and is guaranteed against surface imperfections and discontinuities, which could result in excessive grinding and buffing operations. This quality is suitable for the most demanding electroplated articles and will require a minimum of metal finishing.
Surface texture (aim):
CLA 0,3 micron, maximum
Typical applications:
hub caps, trip rings, mirror housings, household applicances, cutlery, etc.

5.1.7 High matt finish - applicable to vitreous enamelling and tape armouring quality
This is a rough finish and is suitable for 'vitreous enamelling' It is supplied when 'vitreous enamelling' or 'drawing and enamelling' is specified on the order.
The material will be free from defects which cannot be removed by pickling and cleaning prior to enamelling, defects which could cause discontinuities in the enamelled surface and defects which could cause boiling through. it is not guaranteed sag-resistant.
Surface texture (aim)
CLA 1,5 - 3,0 micron
PPI 90 minimum
Typical applications:
Pots, pans, stoves, baths, tape cable armouring, etc.

5.1.8 General
The CLA and PPI ranges specified above must be considered as aims, although every effort will be made to adhere to the above standards.
As readings vary considerably on the same sheet it would be difficult to guarantee these standards.

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5. PRODUKINLIGTING (VERVOLG)
PRODUCT INFORMATION (CONTINUED)

5.2 Smalband/Rolle

Rolle word verskaf sonder oppervlak inspeksie en dit moet aanvaar word dat meer oppervlakdefekte as by gesnyde lengtes sal voorkom, aangesien dit nie moontlik is om defekte g deeltes af te keur nie. Sweislaste kan ook in rolle voorkom en 'n sekere persentasie aan beide kante van die sweislaste sal buite die voorgeskrewe dikte toleransie wees. Die binne en buite omwindsel van die rolle mag gedurende hantering beskadig word. (Opmerking - Smalband in rolle < 600 mm wyd word voorsien, geinspekteer en teruggesny na dikte).
Van klante sal verwag word om, sonder materiaal te aanvaar wat die volgende bevat:-

(i)(a) die binne en buite omwindsels van die rolle, (Smalband en Rolle)

(b) endpunte van rolle buite dikte toleransie as 'terugsny na dikte' nie gespesifiseer is nie (Rolle > 600 mm alleenlik)

(ii) Sweislaste en die materiaal buite dikte toleransie wat hiermee verband hou (Smalband en Rolle).

5.2 Slit Strip/Coils

Coils are supplied uninspected and it must be expected that they will contain more surface imperfections than cut lengths as it is not possible to reject and sort portions containing these imperfections. Coils may also contain welds with a certain percentage of the coil on either side of the weld being outside the specified thickness tolerance. The inner and outer coil wraps may be damaged during handling (Note - Slit Strip in coils < 600 mm wide is supplied, inspected and cut back to thickness).

Customers will be expected to accept without claim, material containing the following:-

(i)(a) the inside and outside wraps, (Slit Strip and Coils)

(b) ends of coils outside thickness tolerance if not ordered 'cut back to thickness' (Coils > 600 mm only)

(ii) Welds and the material outside thickness tolerance associated therewith (Slit Strip and Coils).

5.3 Eindgebruik

Koudgewalste Smalband en Fynplaat word vervaardig om sover moontlik aan die vereistes van die klant se eindgebruik te voldoen. Klante word derhalwe versoek om ons te raadpleeg met die oog op die verkryging van geskikste materiaal vir hul vervaardigingsproses.
Handels-, Sweis- en Trekkwaliteite sowel as ander sproeistaal fynplate is geneig om te verouder of 'verouderingshardheid' te ontwikkel. Om hierdie verskynsel te voorkom, word klante

(a) So gou moontlik na ontvangs te gebruik.

(b) In 'n koel gedeelte van die fabriek op te berg.

(c) Indien moontlik, te rolrig voor verwerking. Alternatiewelik moet klante dit oorweeg om gestabiliseerde staal te gebruik.

(d) Prosedure vir die bepaling van aanvaarbare faalvlakke vir pers/trekaanwendings
Ten spyte van die talle bykomende voorsorgmaatreëls wat getref word tydens die vervaardiging van fynplaat en smalband vir trekdoeleindes kan sekere vervaardigingsveranderlikes teëgekom word wat almal buite Yskor se redelike beheer is, en wat kan bydra tot faling tydens vervaardiging en wat beskou moet word as deel van die normale risiko tydens gebruik deur die koper. Yskor onderneem om, met die koper se instemming, 'n toelatingsvlak vir faling daar te stel.

5.3 End use

Cold Rolled Slit Strip and Sheets are produced to suit customers' end use as far as possible. Customers are, therefore requested to consult us, with a view to obtaining material which will best suit their purpose.

Commercial, welding and drawing quality as well as other rimming grade sheets are susceptable to ageing or 'age hardening' and to minimise this phenomenon, the material should be:-

(a) Used as soon as possible after receipt.

(b) Stored in a cool section of the factory.

(c) Roller levelled if possible before fabrication. Alternatively, customers should consider the use of stabilised steel.

(d) Procedure for determining acceptable breakage levels for pressing/drawing applications
In spite of the many extra precautions exercised in making sheets and strip for drawing purposes certain manufacturing variables may be encountered, all beyond Iscor's reasonable control, which may contribute to breakage in manufacture and must be considered as part of the normal hazard during the purchaser's use. Iscor will undertake to establish, with the purchaser's concurrence, a breakage allowance level.

5. PRODUKINLIGTING (VERVOLG) PRODUCT INFORMATION (CONTINUED)

5.3 Eindgebruik (vervolg)

Vir die doel van hierdie voorstel, word faling omskryf as onherstelbare dele, gebreek tydens trekking en as skrot geklassifiseer. Dele wat lamelleersels toon en wat uit pypvorming voortspruit, kan uitgesluit word, mits dit afsonderlik uitgeken word. Gebreekte dele wat herwin kan word, word nie in hierdie prosedure gedek nie.

Hierdie prosedure is bedoel om 'n falingstoelating daar te stel sonder die nodigheid vir herondersoek van elke gestempelde produk wat gebreek het. Dit sal geld vir algehele faling van 'n gegewe deel wat 1% oorskry, tot en met 8%. Inherente wisselings by staalfynplaat en gewone wisselings by stempelings sluit bevredigende prestasie van 100% uit. Daarom word daar aanvaar dat praktiese volmaaktheid bereik word wanneer 99% van die stempelings sonder faling geproduseer word. Wanneer algehele faling hoër as 8% is, word dit beskou as die resultaat van buitengewone stempeltoestande, en hierdie metode geld dan nie.

Die prosedure vir die bepaling van 'n falingstoelating vir 'n uitgekende deel word gegrond op die gemiddelde persentasie faling van daardie deel, een stel stempelhouers gedurende minstens twee opeenvolgende maande, of persiklusse, watter een ook al van toepassing is. (Die minimum monstergrootte is 1 000 stukke.) Die gemiddelde wat aldus bepaal word, sal beskou word as die toelating vir die deel.

Afsonderlike hysvragte of rolle wat onredelik hoë of 'n buitengewoon hoë mate van wisseling t.o.v. faling vertoon, sal nie oorweeg word by die bepaling van die toelating nie. Sodanige materiaal moet eenkant geplaas en die verskaffer laat weet word.

Gevalle kan voorkom waar buitengewoon moeilike fatsoene getrek moet word en waar daar twyfel kan bestaan oor die korrekte keuse van 'n geskikte staal, of die stempelhouerontwerp kan foutief wees. In sodanige gevalle sal die beoordeling van die geldigheid van 'n koper se eis die gebruik vereis van metodes vir die bepaling van die plastiese deformasie van die fynplaatstaal vir die werklike persstukke gebruik.

Die metodes wat gebruik moet word by die bepaling van die plastiese deformasie van die staal word in breë trekke beskryf in die SAE-handboek onder SAE J863C. Die metode wat voorkeur geniet, is die sirkelroostermetode.

In die afwesigheid van inligting wat gegrond is op monsters van die verdagte staal, wat kan bewys dat die staal bevraagtekenbare meganiese eienskappe het, sal dit 'n vereiste wees dat 'n toets, soos in breë trekke in SAE J863C beskryf, uitgevoer word en dat die resultate beskikbaar moet wees gedurende enige klagteondersoek.

Dit sal uit die voorgaande prosedures duidelik blyk dat die daarstelling van 'n omvattende afkeurvlak vir klante nie moontlik is nie, veral wanneer klante by die vervaardiging van 'n verskeidenheid verskillende persstukke betrokke is. Gevalle sal afsonderlik behandel moet word, en falingstoelatings sal vir elke uitgekende deel vasgestel moet word.

5.3 End use (continued)

Breakage, for the purpose of this proposal, is defined as unrepairable parts, broken during drawing and classed as scrap. Parts showing laminations, resulting from pipe, may be excluded, provided they are separately identified. Broken parts that can be salvaged are not covered in this procedure.

This procedure is intended to establish a breakage allowance without the need for reinspection of each broken stamping. This will apply to overall breakage on a given part in excess of 1% up to and including 8%. Inherent variations in steel properties and normal variations in stamping operations preclude 100% satisfactory performance. Therefore it is accepted that practical perfection is attained when 99% of the stampings are produced without breakage. When the overall breakage is in excess of 8%, it is considered to be the result of abnormal stamping conditions, and this method does not apply.

The procedure for determining a breakage allowance for an identified part is based on the average percentage of breakage on that part, one set of dies, during at least two consecutive months, or press cycles, whichever is applicable. (The minimum sample size is 1 000 pieces.) The average thus determined shall be considered the allowance for the part.

Individual lifts or coils which exhibit unreasonably high or unusually variable breakage will not be considered in determining the allowance. Such material should be set aside and the supplier notified.

Cases may arise where abnormally difficult shapes are to be drawn and where doubt may exist as to the correct selection of a suitable steel or the die design may be at fault. In such cases the assessment of the validity of a purchaser's claim will require the use of methods of determining the plastic deformation of the sheet steel used in the actual pressings.

The methods to be employed for the determination of the plastic deformation of the steel are outlined in the SAE Handbook under SAE J863C. The preferred method being the Circle Grid Method.

In the absence of information based on samples of the suspect steel, which may prove that the steel has questionable mechanical properties, it will be mandatory that a test using the procedures as outlined in SAE J863C be performed and the results be available during any complaint investigation.

In the absence of information based on samples of the suspect steel, which may prove that the establishment of a blanket rejection level for customers is not possible, particularly where customers are engaged in manufacturing a variety of different pressings. Cases will have to be dealt with individually and breakage allowances be established for each identified part.

5. PRODUKINLIGTING (VERVOLG)
PRODUCT INFORMATION (CONTINUED)

5.3 Eindgebruik (Vervolg)
Die prosedure wat hierbo in breë trekke beskryf is, lei tot die gevolgtrekking dat watter aanvaarbare falingsvlak ook al vasgestel word betrekking sal hê op die besondere persstuk. Enige verandering aan die ontwerp, byvoorbeeld 'n model-verandering, sal die vasstelling van 'n nuwe aanvaardingsvlak noodsaak.

5.3 End use (Continued)
The procedure outlined above infers that, whatever the acceptable breakage level established it will relate to the particular pressing. Any change to the design, such as for example a model change, will necessitate the establishment of a new acceptance level.

5.4 ROESVOORKOMING
Koudgewalste fynplaat is, wanneer dit nie toereikend beskerm is nie, vatbaar vir roes en verbruikers word aangeraai om die volgende voorsorgmaatreëls te tref:-

5.4 RUST PREVENTION
Cold-rolled sheet, when not adequately protected, is succeptible to rust and users are advised to take the following precautions:-

5.4.1 BERGING/STORAGE

Berg die fynplaat op onder toestande van lae humiditeit (minder as 60%). Hoë humiditeit laat roes vinniger vorm.
Indien dit nie moontlik is om die humiditeit of of temperatuur te beheer nie moet die fynplaat opgeberg word waar die lugsirkulasie goed is. Stagnante lug, tesame met temperatuursveranderings, laat vog vorm, en die fynplaat roes gevolglik.

Store the sheet under low humidity conditions (less than 60%). High humidity accelerates the formation of rust.
If it is impossible to control humidity or temperature the sheet must be stored where the air circulation is good. Stagnant air, together with temperature changes, precepitates moisture and rusting of the sheet consequently takes place.

5.4.2 OLIE/OILD

Bestel die fynplaat met olie bedek. Die tipe olie wat gebruik word is volgens 'n bepaalde formule vir die voorkoming van roes. Dit is slegs as tydelike beskerming bedoel, en hierdie fynplaat moet beskerm word om te verhoed dat dit in aanraking kom met vog of stof, wat geneig is om die beskermende olielagie te breek sodat roes vorm.

Order the sheets oiled. The type of oil used is specifically formulated for the prevention of rust. It is intended as a temporary protection only and these sheets must be protected to prevent contract with moisture or dust which tends to break the protective oil film, resulting in rusting.

5.4.3 VERPAKKING/PACKING

Bestel fynplaat in 'n beskermde verpakking (verwys Bladsy P7 - P11). Die aantal dae na word in Tabel 1 aangetoon:

Order sheet in a protective packing (refer Page P7 - P11). The number of days after despatch that

Tabel 1 : Aantal dae na versending wat roes voorkom kan word/
Table 1 : Number of days after despatch that rust can be prevented.

PRODUK / PRODUCT	VERPAKKING/PACKING		AANTAL NUMBER	DAE / OF DAYS
	KODE / CODE	BESKRYWING / DESCRIPTION	Ge-oliede materiaal Oiled material	Onge-oliede materiaal Unoiled material
Gesnyde lengte / Cut lengths	05 en / and 06	Onbeskermde verpakking op lengte of op lengte- en dwarsglyplanke/Unprotected packing on lengthwise or on length and crosswise skids	0	0
	15 en/ and 16	Waterdigte paperbedekking op lengte of op lengte- en dwarsglyplanke/Waterproof paper covering on lengthwise or on length and crosswise skids.	60	30
	25 en/and 26	Waterdigte roeswerende papier, kantbeskerming en dekplate op lengte of lengte- en dwarsglyplanke/ Waterproof and rust preventative paper, edge protective and sheet covering on lengthwise or length and crosswise skids	120	90
Rolle/coils	08 en/and 09	Onbeskermde verpakking op of sonder wiegdraers/ Unprotected packing on or without cradles	0	0
	18 en/and 19	Waterdigte papierbedekking op of sonder wiegdraers/Waterproof paper protection on or without cradles.	60	30
	28 en/and 29	Waterdigte roeswerende papier en skrot-bedekking op of sonder wiegdraers/ Waterproof rust preventative paper and scrap covering on or without cradles	120	90

5.4.3 VERPAKKING (VERVOLG)/PACK (CONTINUED)

OPMERKING:

(i) Geen eise vir roes sal oorweeg word indien verpakking in transito en tydens daaropvolgende hantering beskadig is nie

(ii) Geen eise vir roes sal oorweeg word indien materiaal in die buitelug of in 'n ondoeltreffende pakhuis geberg word nie.

(iii) Eise vir roes sal slegs oorweeg word indien dit ingedien word binne die periodes wat in Tabel 1 aangedui is. Waar die aantal dae wat materiaal teen roes beskerm kan word, gelyk is aan nul (Kodes 05, 06, 08 en 09) word materiaal gevolglik in totaal op klant se risiko voorsien en geen roes eis sal hoegenaamd deur die Korporasie oorweeg word nie.

(iv) Enige skikking van 'n eis ten opsigte van roes, sal afhang van die uitslag van 'n ondersoek en bevindings deur die korporasie.

5.4.4 ALGEMEEN/GENERAL

(i) Wanneer pakke of rolle oopgemaak word moet die fynplaat met die minimum vertraging gebruik word.

(ii) In gevalle waar die fynplaat regstreeks met water in aanraking kom, moet dit met 'n goedgekeurde ontwaterolie behandel word en onmiddellik gebruik word.

5.5 FISIESE SKADE/PHYSICAL DAMAGE

Alle materiaal moet ondersoek word vir nattigheid of skade wanneer dit van die voertuig afgelaai word. Afleweringsbriewe moet geëndosseer word en Yskor moet onmiddellik verwittig word. Geen laat eise sal aanvaar word nie.

5.6 SEILE/TARPAULINS

Alle materiaal versend deur die Werke sal duer SEILE bedek wees tydens vervoer.

GOLD ROLLED COILS/SLIT STRIP/SHEETS
5. PRODUCT INFORMATION (CONTINUED)

NOTE:

(i) No claims for rust will be considered if the packing has been damaged in transit and during subsequent handling.

(ii) No claims for rust will be considered when material is stored in the open or in an unefficient warehouse.

(iii) Claims for rust will only be considered when submitted within the periodes prescribed in Table 1. Where the number of days material can be protected against rust are equal to nil (Codes 05, 06, 08 and 09) will material consequently in total be supplied solely at customer's risk and no claim for rust will at all be considered by the Corporation.

(iv) Any settlement of a claim in connection with rust will depend on the result of the Corporation's investigation and findings.

(i) When opening packs or coils the sheets must be used with a minimum of delay.

(ii) In the event of sheets coming into direct contact with water, it should be treated with an approved dewatering oil and used as soon as possible.

All material to be inspected for wetness or damage when off-loaded from transporters. Delivery notes must be endorsed and Iscor advised immediately. No late claims will be accepted.

All material dispatched by the Works will be covered by TARPAULINS during transit.

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YSKOR BEPERK ISCOR LIMITED

EISE : TOELATINGSBELEID (VERVOLG)

CLAIMS : ALLOWANCE POLICY (CONTINUE)

4.2 Rolle

4.2.1 Toelaatbare persentasie afkeurings op bestelde massa per item:
3% op 200 ton en meer
4% op 100 ton tot onder 200 ton
5% op onder 100 ton
Bogenoemde toelaatbare persentasie afkeurings kan soos volg gewysig word:

(a) Dit sal met 1% verminder word as 3.2.1. nie in die afkeuringsakkumulering ingesluit is nie.

(b) Dit sal met 1% verminder word as 3.2.2 nie in die afkeuringsakkumulering ingesluit is nie.

4.2.2 Afsonderlike rolle
10% afkeurings moet aanvaar word sonder dat enige eis ingestel word. Enige rol met klaarblyklike hoë frekwensie van wals imperfeksies, mag opsy gesit word vir klagteondersoek.
Wanneer daar vasgestel word dat afkeurings meer as 10% uitmaak sal minstens 10% van die rol verwerk moet word, om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n rol so spoedig as prakties moontlik staak, nadat die 10% minimum van die verskeepte massa van die afsonderlike rol verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die afkeurings 10% of minder is, moet die afkeurings ingesluit word in die bepaling van die algemene gemiddelde vlak van afkeuring (verwys na paragraaf 4.2.1). Indien meer as 10%, sal die rol onderworpe wees aan afsonderlike onderhandeling.

4.2 Coils

4.2.1 Percentage rejects allowance on ordered mass per item:
3% on 200 tons and over
4% on 100 tons to under 200 tons
5% on under 100 tons
Adjustments to the above percentage allowance may be made as follows:

(a) 1% will be deducted when 3.2.1 is not included in the rejection accumulations.

(b) 1% will be deducted when item 3.2.2 is not included in the rejection accumulations.

4.2.2 Individual coils
10% rejctions must be accepted without claim. Any coil with an apparantly high frequency of mill imperfections, may be set aside for claims investigations. When rejections are determined to be over 10% at least 10% of the coil will have to be processed to enable a reasonable assessment to be made of the reject level. The processor must discontinue the processing of such coil as promtly as practicable after processing the 10% minimum of shipped mass of the individual coil in order to preserve the possible usefulness of the material for other applications. If rejections are 10% or less these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.2.1). If more than 10%, the coil will be subject to separate negotiation.

5. **EISE VIR METAALAFWERKING VAN HERSTELBARE IMPERFEKSIES VAN TOEPASSING OP MATAFWERKING-BLOOTGESTELDE BUITEAANWENDIEGS (ISF) ALLEEN (VOORSIEN AS GESNYDE LENGTES)**
Dié materiaal word gelewer met dien verstande dat 'n mate van herverwerking deur die klant aanvaarbaar moet wees. Ooreenkomstig die algemene eisetoelatingsbeleid is die volgende van toepassing:

5. **CLAIMS FOR METAL FINISHING OF REPAIRABLE IMPERFECTIONS APPLICABLE TO MATT FINISH EXPOSED EXTERIOR APPLICATIONS (ISF) ONLY (SUPPLIED AS CUT LENGTHS)**
This materal is supplied on the distinct understanding that some reworking by the customer is to be acceptable. In line with the general claims allowance policy the following will apply:

5.1 Totale massa per bestelde item
Tot en met 1% metaalafwerking van fynplate moet deur klant aanvaar wo. sonder dat enige eis ingestel word. 1% beteken hier dat 1% van die oppervlakarea metaalafgewerk moet wees.

5.1 Total mass per item ordered
Up to 1% metal finishing of sheets must be accepted by customer without claim. 1% here means 1% surface area to be metal fininshed.

5.2 Afsonderlike pakke
8% metaalafwerking moet aanvaar word sonder dat enige eis ingestel word. Enige pak wat klaarblyklik 'n hoë frekwensie van metaal-afwerking vereis, mag opsy gesit word vir klagteondersoek. Wanneer daar vasgestel word dat die metaalafwerking verlang meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die metaalafwerking verlang. Die verwerker moet die verwerking van so 'n pak so spoedig as prakties moontlik staak, nadat die 8% minimum van verskeepte massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die metaalafwerking verlang 8% of minder is, moet die metaalafwerking verlang ingesluit word vir die bepaling van die algehele gemiddelde vlak van metaalafwerking (verwys na paragraaf 5.1).
Indien meer as 8% sal die pak onderworpe wees aan afsonderlike onderhandeling.

5.2 Individual lifts
8% metal finishing must be accepted without claim. Any lift apparently requiring a high frequency of metal finishing may be set aside for claims investigation. When metal finishing required is determined to be over 8% at least 8% of the lift must be processed to enable a reasonable assessment to be made of the metal finishing required. The processor must discontinue the processing of such lifts as promptly as practicable after processing of the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications.

If metal finishing required is 8% or less, the metal finishing required must be incorporated for determining the overall average metal finishing level (refer to paragraph 5.1).
If more than 8%, the lift will be subject to a separate negotiation.

5.3 Eise vir herstelbare defekte van toepassing op ander oppervlakafwerkings en/of produkte (bv. warmgewals) word nie normaalweg deur die Korporasie aanvaar nie, hoewel, enige sodanige eis wat ingedien word sal volgens meriete behandel word en is onderhewig aan onderhandeling.

5.3 Claims for repairable defects applicable to other surface finishes and/or products (e.g. hot rolled) would not normally be accepted by the Corporation. However, any such claim submitted will be treated on merit, and would be subject to negotiation.

6. **ALGEMEEN**
Die bedrag van enige eis is beperk tot die prys wat vir die betrokke produk betaal is, plus vervoerkoste deur die koper betaal.
Die werklike toelating is die totale persentasie van opgehoopte afgekeurde persentasies, gebaseer op massa per bestelde item, min die verhaalbare waarde.

6. **GENERAL**
The amount of any claim is limited to the price paid for product concerned, plus transportation charges paid by the buyer.
The actual allowance will be the total percentage of accumulated rejection percentages, based on mass per ordered item, less the recovery value.

ALGEMEEN/GENERAL

EISE : TOELATINGSBELEID

1. INLEIDING

By die produksie van warmgewalste, koudgewalste en versinkte fynplaat is daar afwykings wat inherent is in die staal en die verwerking daarvan, wat verhoed dat dit geheel en al aan die vereistes voldoen ten opsigte van die produkeienskappe wat deur die klant verlang word.

Die inligting hieronder uiteengesit, is veronderstel om aan die Korporasie se Klante 'n duidelike beeld te gee van sy verantwoordelikhede met betrekking tot die mees algemene afwykings in fynplaat wat in rolle en gesnyde lengtes vervaardig word.

2. OPPERVLAKINSPEKSIE

Dit is gewone praktyk om die boonste oppervlak van gesnyde lengtes te inspekteer, wanneer dit van rolle in lengtes gesny word. Rolle word nie geïnspekteer nie, maar die kant met die gespesifiseerde oppervlak-afwerking sal aangedui wees. Omdat die bokant van 'n gesnyde lengte of aangeduide kant van 'n rol die kant is met die gespesifiseerde oppervlakafwerking mag die anderkant meer dikwels oppervlakimperfeksies bevat. Voorsorg maatreëls moet getref word om die aangeduide kant te gebruik vir die kritiese oppervlak van 'n gefabriseerde onderdeel te gebruik.

Rolle bevat meer oppervlakimperfeksies as gesnyde lengtes aangesien dit nie moontlik is om die gedeeltes wat die imperfeksies bevat af te keer en te sorteer, soos in die geval van gesnyde lengtes nie.

3. WALSDEFEKTE WAARVOOR GEWYSIGDE EISTOELATINGS GEMAAK KAN WORD

3.1 Gesnyde Lengtes

3.1.1 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

3.1.2 Herstelbare imperfeksies (verwys par. 5).

3.2 Rolle

3.2.1 Binne- en Buiteomwindsels slegs vir materiaal wat tot dikte teruggesny is.

OPMERKING:

(a) Warmgewalste walsrandrolle word direk vanaf die Warmbandwalse voorsien, en mag tot en met 7 meters buite dikte toleransie per rol (albei ente ingesluit) bevat wat onvoorwaardelik deur die klant aanvaar moet word.

(b) Koudgewalste rolle wat sonder terugsnyding tot dikte bestel word, mag tot 50 meters (albei ente ingesluit) buite diktetoleransie wees, wat die klant moet aanvaar sonder om enige eis in te stel.

3.2.2 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

4. TOELATINGSBELEID

Walsdefekte wat afkeurings tot gevolg het, wat die persentasie hieronder gespesifiseer oorskry, kan op Yskor se rekening geplaas word op die grondslag van 'n gewysigde eistoelating.

Die nakoming moet gebaseer word op minstens 50% van die bestelde massa per omstrede item.

4.1 Gesnyde lengtes

4.1.1 Toelaatbare persentasie afkeurings ten opsigte van bestelde massa per item - 1%.

4.1.2 Afsonderlike pakke

8% afkeurings moet aanvaar word sonder dat enige eis ingestel word.

Enige pak met 'n klaarblyklike hoë frekwensie van walsimperfeksies mag opsy gesit word vir klagteondersoek.

Wanneer daar vasgestel word dat afkeurings meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n pak so spoedig as prakties moontlik staak, nadat die 8% minimum van die verskeepte massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die afkeurings 8% of minder is, moet die afkeurings ingesluit word vir die bepaling van die algehele gemiddelde vlak van afkeuring (verwys paragraaf 4.1.1.). Indien meer as 8% sal die pak [illegible]

CLAIMS : ALLOWANCE POLICY

1. INTRODUCTION

The production of Hot Rolled, Cold Rolled and Galvanised sheet involves variations inherent in the steel and processing, which prevents the realisation of complete conformity to the product attributes desired by the customer.

The information set forth below is intended to give the Corporation's Customers a clear understanding of its responsibilities relating to the most common variations in sheet produced in coils and cut lengths.

2. SURFACE INSPECTION

It is common practice to inspect the top surface of cut lengths as they are sheared to length from coils. Coils are not inspected, but the side with the specified surface finish will be identified. Because the top side of a cut length or identified side of a coil is the side with the specified surface furnish. The opposite side may contain more frequent surface imperfections.

Precautionary measures should be taken to use the identified side for the most critical surface of a fabricated part.

Coils contain more surface imperfections than cut lengths as it is not possible to reject and sort portions containing such imperfections, as is the case with cut lengths.

3. MILL DEFECTS FOR WHICH ADJUSTED CLAIM ALLOWANCE CAN BE MADE

3.1 Cut Lengths

3.1.1 Non-repairable imperfections (surface and/or breakage).

3.1.2 Repairable imperfections (refer paragraph 5).

3.2 Coils

3.2.1 Inner and outer wraps for material cut back to thickness only.

NOTE:

(a) Mill rum, mill edge coils are supplied direct from the Hot Strip Mills and may contain up to 7 metres per coil (both ends included) out of thickness tolerance which customer must accept without claim.

(b) Cold-rolled coils ordered not cut back to thickness, may contain up to 50 metres (both ends included) out of thickness tolerance which the customer must accept without claim.

3.2.2 Non-repairable imperfections (surface and/or breakage).

4. ALLOWANCE POLICY

Mill defects resulting in rejections exceeding the percentage specified below are chargeable to Iscor on an adjusted claim allowance basis.

The performance must be based on at least 50% of the ordered mass per item in dispute.

4.1 Cut Lengths

4.1.1 Percentage reject allowance on ordered mass per item - 1%.

4.1.2 Individual lifts

8% rejections must be accepted without claim.

Any lift with an apparently high frequency of mill imperfections may be set aside for claims investigation.

When rejections are determined to be over 8%, at least 8% of the lift will have to be processed to enable a reasonable assessment to be made of the reject level. The processor should discontinue the processing of such a lift as promptly as practicable after processing the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications. If rejections are 8% or less, these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.1.1). If more than 8%, the lift will be subject to separate negotiation.

DECLASSIFIED

S.P.E. 135

YSKOR BEPERK ISCOR LIMITED

KOUDGEWALSTE CHROMADEK EN TEXTRADEK

COLD ROLLED CHROMADEK AND TEXTRADEK

DECLASSIFIED

KOUDGEWALSTE CHROMADEK EN TEXTRADEK

VOORWOORD

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Alle pryse is onderworpe aan 'n verefeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.
3. Tensy anders bestel, is alle items onderworpe aan 'n oormaat of ondermaat - sien bladsy S5.par. 5.1.
4. Materiaal gedek deur hierdie S.P.E. word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die geykte massameter/massameterbrug by die Werke. Enige verwysing na die getal plate/rolle op die faktuur of vragbrief is slegs vir inligting.
5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.
6. Normale toetsing en inspeksie, soos in die verskillende spesifikasies uiteengesit, word uitgevoer.
7. Pryse en ekstras is dié wat op die versendingsdatum geld, en is onderworpe aan veranderings sonder kennisgewing.
8. Wanneer bestel word, moet klante altyd die eindgebruik spesifiseer.
9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.
10. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.
11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

COLD ROLLED CHROMADEK AND TEXTRADEK

PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.
2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.
3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - see page S5 par. 5.1.
4. Material covered by this S.P.E. are sold at a price per metric ton (1 000 kilograms) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of sheets/coils on the invoice or consignment note is for information only.
5. Extras and deductions quoted herein are per metric ton, unless otherwise stated. Each extra or deduction is separate and distinct.
6. Normal testing and inspection as outlined in the various specifications are carried out.
7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.
8. When ordering customers should always state the end use.
9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.
10. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.
11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD

A.	Pryse	Bladsy
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3.	Grootte-ekstras	P1 & P2
4.	Kwaliteitsekstras	P2
5.	Verwerkings-/Metallurgiese vereistes	P2
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7.	Verpakkingsekstra	P3 & P5
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2.	Foeliebedekkings	V2
3.	Verfglansreeks	V2
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2.	Kwaliteit	S1
3.	Groottereeks	S2
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OBSOLETE

S.P.E. 135

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer/
      (iii) Padvervoer
2. PRODUK:
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - spesifiseer
   (g) Oppervlak afwerking
   (h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Beperking op oor-/ondermaat
4. Wydte en dikte
5. Lengte
6. Kwaliteit
7. Spesiale verwerkings/metallurgiese vereistes
8. Bedekkingsekstras
9. Verpakkingsekstras
10. Invoerheffing (R10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport/
      (iii) Road Transport
2. PRODUCT:
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - specify
   (g) Surface finish
   (h) End uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Restriction on over-/underage
4. Width and thickness
5. Length
6. Quality
7. Special processing/metallurgical requirements
8. Coating extras
9. Packing extras
10. Import Levy (R10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Keampton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

KOUDGEWALSTE CHROMADEK EN TEXTRADEK

A. PRYSE/PRICES

1. **Basisprys:** (gebaseer op Handels-kwaliteit koudgewalste substraat rolle)
   (a) PWV[1]) gebied ..... R578-50 /1000 kg v.o.s. Yskorwerke Vanderbijlpark (Sylyn 1414 Bijlkor) plus pad-vervoer/spoorvrag.
   (b) Buite PWV[1]) gebied .... R578-50 /1000 kg v.o.s. Germiston plus spoorvrag.

2. **Hoeveelheidsekstras/aftrekkings**

2.1 **Itemekstras/aftrekkings**

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die korporasie uitgereik t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

COLD ROLLED CHROMADEK AND TEXTRADEK

1. **Basis Price:** (based on Commercial Quality cold rolled substrate coils)
   (a) PWV[1]) area ..... R578-50 /1000 kg f.o.r. Iscor Works Vanderbijlpark (Siding 1414 Bijlkor) plus cartage/railage.
   (b) Outside PWV[1])area ..... R578-50 /1000 kg f.o.r. Germiston plus railage.

2. **Quantity extras/deductions**

2.1 **Item extras/deductions**

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for despatch to one destination at Work's convenience.

ITEM (TON/TONS)	EKSTRA/EXTRA R.c.	AFTREKKING/DEDUCTION R.c.
≤ 5	op aansoek/on application	
5 – ≤ 10	17-95	
10 – < 20	8-90	
20 – ≤ 40	4-35	
40 – < 100	0-00	0-00
100 – < 200		4-65
≥ 200		7-60

2.2 **Gespesifiseerde minimum of maksimum hoeveelhede**

(a) Vir gespesifiseerde minimum hoeveelhede
Ekstra (2440) R3-50
(b) Vir gespesifiseerde maksimum hoeveelhede
Ekstra (2293) R3-50
2.3 Vir gespesifiseerde presiese aantal plate
Ekstra (2170) R14-70

2.2 **Specified minimum or maximum quantities**

(a) For specified minimum quantities
Extra .(2440) R3-50
(b) Vir specified maximum quantities
Extra (2293) R3-50
2.3 For specified exact number of sheets
Extra (2170) R14-70

3. **GROOTTE EKSTRAS**

3.1 **Rolle, Gesnyde Lengtes en Smalband**

3. **SIZE EXTRAS**

3.1 **Coils, Cut Lengths and Slit Strip**

STANDAARDDIKTE STANDARD THICKNESS (mm)	STANDAARDWYDTES mm (ROLLE EN LENGTES 25 mm TRAPPE, SMALBAND 5 mm TRAPPE) STANDARD WIDTHS mm (COILS AND CUT LENGTHS 25 mm INCREMENTS, SLIT STRIP 5 mm INCREMENTS)							
	150 – <250	250 – <600	600 <800	800 – <925	925 <1000	1000 – <1200	1200 <1500	1500 – 1600
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
2,0	46-45	36-40	26-25	20-40	16-20	13-10	5-95	7-65
1,6	40-30	30-25	20-40	14-20	10-10	7-00	0-00	1-60
1,2	48-60	38-35	28-30	22-25	18-00	15-05	8-15	10-75
1,0	58-45	48-60	38-35	32-20	28-30	25-35	18-00	22-15
0,8	68-60	58-45	48-60	42-30	38-35	35-30	28-30	35-10
0,6(a)	78-70	68-60	58-45	52-40	48-60	45-40	38-35	-
0,5(b)	96-80	86-85	76-85	70-75	66-50	63-60	56-50	-
0,4(c)	115-00	104-95	94-90	88-65	84-95	81-65	-	-

Nota: (a) Maks. wydte 1400 mm
(b) Maks. wydte 1225 mm
(c) Maks. wydte 1050 mm

3.2 Nie-standaardwydte ekstras

Vir nie-standaardwydtes geld die ekstras soos in die wydte en dikte tabel aangetoon (par. 3.1) plus die volgende
(a) Smalband - Nie-standaard trappe van 1 mm R9-05
(b) Fynplaat/Rolle - Nie-standaard trappe van 5 mm R9-05

Note: (a) Max. width 1400 mm
(b) Max. width 1225 mm
(c) Max. width 1050 mm

3.2 Non standard width extras

For non standard widths the extras shown in the width and thickness table (par. 3.1) apply plus the following
(a) Slit Strip - Non standard increments of 1 mm R9-05
(b) Sheets/Coils - Non standard increments of 5 mm R9-05

3. GROOTTE EKSTRAS (vervolg) / SIZE EXTRAS (continued)

3.3 STANDAARD LENGTE EKSTRAS (Vir wydtes 600–1600 mm) / STANDARD LENGTH EXTRAS (For widths 600–1600 mm)

DIKTE / THICKNESS (mm)	STANDAARD LENGTE/STANDARD LENGTH (m) (TRAPPPE VAN 25mm) / STEPS OF 25 mm)					
	1,0 – 1,2	> 1,2 – 1,5	> 1,5 – 2,5	> 2,5 – 3,5	> 3,5 – 4,5	> 4,5 5,0
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
1,2 – 2,0	33–50	28–30	23–30	23–20	26–25	37–20
0,8 – <1,2	35–30	30–25	25–35	25–35	28–30	–
0,6 – <0,8	37–35	32–20	27–35	27–35	30–25	–
0,5 – <0,6	40–30	35–30	30–25	30–25	32–20	–
0,4 – <0,5	44–50	38–35	33–50	–	–	–

Lengtebeperkings verwys bl. S2 par. 3.

Length restrictions – refer page S2 para. 3.

3.4 Nie Standaard lengte ekstras

Vir nie standaard lengtes geld die ekstras soos in die standaard lengte tabel (par. 3.3) plus die volgende.

Nie standaard trappe van 5 mm R3-55

3.4 Non Standard length extras

For non standard lengths the extras shown in the standard length table (par. 3.3) apply plus the following.

Non standard increments of 5 mm..... R3-55

4. KWALITEITSEKSTRAS / QUALITY EXTRAS

Aangeduide analises is gietpotanalise

Indicated analyses are ladle analysis

SPESIFIKASIE/SPECIFICATION	EKSTRA/EXTRA
	R.c.
Handelskwaliteit/Commercial Quality (Koolstof 0,15% maks./Carbon 0,15% max.)	0-00
BS 1449 CR 2	37-00
BS 1449 CS4/BS1449 CR4	7-75
BS 1449 KCS1/BS 1449 KCR1	62-75

5. SPESIALE VERWERKINGSEKSTRAS / SPECIAL PROCESSING EXTRAS

5.1 Weeg van afsonderlike bondels/rolle en die aanbring van die aangerekende massa op elke bondel/rol R2-05

5.1 Weighing of individual bundles/coils and marking the recorded mass on each bundle/ Coil R2-05

5.2 Hersny of haaksny ... op aanvraag. (Klante moet kennis neem dat skrape op materiaal kan voorkom na snyproses.)

5.2 Reshearing and resquaring ..... on application (Customers must note that scratches may occur to material during the cutting process.)

6. BEDEKKINGSEKSTRAS[1] / COATING EXTRAS[1]

Pryse per ton vir een kant bedek en sluit in epoksiegrondlaag en/of kleefmiddel waar van toepassing.

Prices per ton for one side coated and includes epoxy primer and/or adhesive where necessary.

6.1 VERF EKSTRAS / PAINT EXTRAS

DIKTE/THICKNESS (mm)	VERFTIPE/PAINT TYPE					
	VOLLAAG/FULL COAT*			HALFLAAG/HALFCOAT*		GRONDLAAG[1] PRIMER
	POLIËSTER/ POLYESTER R.c./TON	VINIEL/ VINYL R.c./TON	PLASTISOL/ PLASTISOL R.c./TON	VINIEL/ VINYL R.c./TON	STANDAARDRUGLAAG[2] STANDARD BACKING COAT[2] R.c./TON	EPOKSIE EPOXY R.c./TON
2,0	23–70	28–80	77–45	14–70	16–65	5–10
1,6	29–95	36–45	98–00	18–65	21–05	6–50
1,2	39–95	48–60	130–70	24–85	28–10	8–65
1,0	48–45	58–95	158–50	30–15	34–05	10–50
0,8	60–70	73–80	198–45	37–70	42–65	13–10
0,6	82–15	99–90	268–60	51–05	57–70	17–75
0,5	99–90	121–50	326–70	62–10	70–20	21–60
0,4	122–85	149–40	401–70	76–35	86–30	26–55

* Vollaag: Normaalweg aan die sigbare kant van materiaal
* Halflaag: Normaalweg aan agterkant van materiaal.
Grondlaag: 1) Insluitende korrosiebestande pigmente.
2) Standaardruglaag is normaalweg 'n halflaag poliëster plus epoksie grondlaag

* Full coat: Normally on facing side of material.
* Half coat: Normally on backing side of material.
Primer: 1) Including corrosion inhibitive pigments.
2) Standard backing coat normally consists of a halfcoat polyester plus epoxy primer.

KOUDGEWALSTE CHROMADEK EN TEXTRADEK
6.2 FOELIEBEDEKKING EKSTRAS

COLD ROLLED CHROMADEK AND TEXTRADEK
6.2 FILM COATING EXTRAS

DIKTE/THICKNESS (mm)	FOELIETIPE/FILM TYPE			
	HOUTGREIN WOODGRAIN R.c./TON	LINNE LINEN R.c./TON	MARMER MARBLE R.c./TON	EFFEKLEURE PLAIN COLOURS R.c./TON
2,0 1,6 1,2	147-20 186-30 248-40	147-20 186-30 248-40	147-20 186-30 248-40	141-45 179-00 238-70
1,0 0,8 0,6	301-30 377-20 510-60	301-30 377-20 510-60	301-30 377-20 510-60	289-50 362-45 490-60
0,5 0,4	621-00 763-60	621-00 763-60	621-00 763-60	596-70 733-70

OPMERKINGS:
(1) Vir verf en/of foelie kombinasies sien bladsy V2 paragraaf 3.

NOTES:
(1) For paint and/or film combinations see page V2 paragraph 3.

7. VERPAKKINGSEKSTRAS (BETALING VOLGENS BRUTO MASSA)
PACKING EXTRAS (GROSS MASS CHARGED)

7.1 SMALBAND EN FYNPLAAT IN ROLLE
Rolle is beskikbaar tot 'n maksimum massa (uitgedruk in kg/mm van wydte) soos uiteengesit in die volgende tabel. (Klante moet vanaf die tabel die mees aanvaarbare rolgrootte vir hul behoeftes kies en dit op die bestelling spesifiseer.)

7.1 SLIT STRIP AND SHEET IN COILS
Coils are available to a maximum mass (expressed in kg/mm of width) as set out in the following table. (Customers should select from the table and specify on the order the coil size most suited to their requirements.)

7.1.1 EKSTRAS - ROLMASSA
ROLLE GEMONTEER OP OF SONDER WIEGDRAERS

7.1.1 EXTRAS - COIL MASS
COILS MOUNTED ON OR NOT MOUNTED ON CRADLES

MATERIAAL WYDTE/ MATERIAAL WIDTH (mm)	MAKS KG/MM WYDTE/ MAX KG/MM WIDTH (mm)	KODE CODE	PADVERVOER/ROAD TRANSPORT		SPOORVERVOER/RAIL TRANSPORT	
			SONDER WIEGDRAER WITHOUT CRADLE (38)	OP WIEDRAER ON CRADLE (34)	OOG HORISONTAAL EYE HORISONTAL (39)	OOG VERTIKAAL EYE VERTICAL (37)
SMALBAND IN ROLLE/ SLITSTRIP IN COILS 150 - < 600	12,50	30	0,00	0,00	0,00	0,00
	6,25	31	0,00	0,00	0,00	0,00
	4,20	32	0,00	0,00	0,00	0,00
	3,15	33	0,00	0,00	0,00	0,00
	2,50	34	0,00	0,00	0,00	0,00
	2,10	35	0,00	0,00	0,00	0,00
ROLLE/COILS 600 - 1 225	*12,50	30	0,00	0,00	0,00	0,00
	6,25	31	0,00	0,00	0,00	0,00
	4,20	32	0,00	0,00	0,00	0,00
	3,15	33	0,00	0,00	0,00	0,00
	2,50	34	0,00	0,00	0,00	0,00
	2,10	35	0,00	0,00	0,00	0,00
	1,80	36	0,00	0,00	0,00	0,00
	1,60	37	0,00	0,00	0,00	0,00
ROLLE/COILS > 1 225 - 1 600	6,25	31	0,00	0-00	0,00	0-00
	4,20	32	0,00	0-00	0,00	0-00

* Maks. rolmassa beskikbaar is 10 ton.

* Max. coil mass available is 10 tons.

7. VERPAKKINGSEKSTRAS (BETALING VOLGENS BRUTO MASSA)/ PACKING EXTRAS (GROSS MASS CHARGED)

7.1.2 Opmerkings

(i) Rolle op wiegdraers word normaalweg slegs vir Spoorvervoer aangebied en deurgaans met die oog in die breedte van 'n trok gelaai. Rolle sonder wiegdraers word slegs vir padvervoer aangebied en met die oog in die lengte rigting van 'n vragmotor gelaai. Indien wiegdraers vir padvervoer aangevra word moet klant spesifiseer in watter rigting die oog van die rol gelaai moet word.

(ii) Bondelgrootte: Rolle strookstaal word deur middel van bande in bondels gebind in groottes om by werkepraktyk te pas. Gespesifiseerde maksimum bondelmassa ..... Op aansoek

(i) Rolmassa: Die rolmassa hierbo aangetoon is onderworpe aan verandering.

7.1.2 Notes

(i) Coils on cradles are normally for rail transport only and coils are loaded with the eye of the coil tranversely onto the truck. Coils without cradles are normally for road transport only and coils are loaded with the eye of the coil lengthwise onto the motortruck. If cradles for road transport are specified then customer must ensure that the direction of the eye of the coil is specified on the order.

(ii) Bundle size: Coils Slit strip are strapped together to form bundles in sizes to suit Work's practice. Specified maximum bundle mass ..... On application

(iii) Coil mass: The coil mass indicated above is subject to alteration.

7.2 FYNPLAAT - GESNYDE LENGTES

Gesnyde lengtes is beskikbaar in die volgende bondelgroottes en tipe verpakking. (Klante moet die geskikste bondelgrootte en tipe verpakking vir hul behoeftes kies en dit op die bestelling aandui):-

7.2 SHEETS - CUT LENGTHS

Cut sheets are available in the following bundle sizes and type of packing. (Customers should select the bundle size and type of packing best suited to their requirements and state it on the order):-

7.2.1 FYNPLAAT - GESNYDE LENGTES

7.2.1 SHEETS - CUT LENGTHS

TIPE VERPAKKING / TYPE OF PACKING	MATERIAAL WYDTE / MATERIAL WIDTH (mm)					
	600 - 1225				>1225 - 1600	
	BONDELMASSA (TON)/ BUNDLE MASS (TONS)				BONDELMASSA (TON)/ BUNDLE MASS (TONS)	
	KODE / CODE 03 1,25 t R.c.	KODE / CODE 02 2,5 t R.c.	KODE / CODE 10 4,0 t R.c.	KODE / CODE 01 5,0 t R.c.	KODE / CODE 10 4,0 t R.c.	KODE / CODE 01 5,0 t R.c.
1. Kant beskermde verpakking met waterdigte papier en skrootplaat bedekking op / Edge protective packing with waterproof paper and scrap sheet covering on: (i) Lengte en dwarsglyplanke / Length and cross-wise skids kode / Code 26	(a) 0-00	0-00	(b) 0-00	0-00	(b) 0-00	0-00

7.2.2 OPMERKINGS:

1. Die Korporasie behou hom die reg voor om bondels te lewer waarvan die massa minder is as die bestelde massa, of om bondels te lewer tot 10% swaarder as die bestelde massa.
2. Min. plaatgrootte - (a) 0,9 m^2
   (b) 1,1 m^2

7.2.2 NOTES:

1. The Corporation reserves the right to supply bundles which may have a mass less than the ordered bundle mass, or have a mass up to 10% more than the ordered bundle mass.
2. Min. sheet size - (a) 0,9 m^2
   (b) 1,1 m^2

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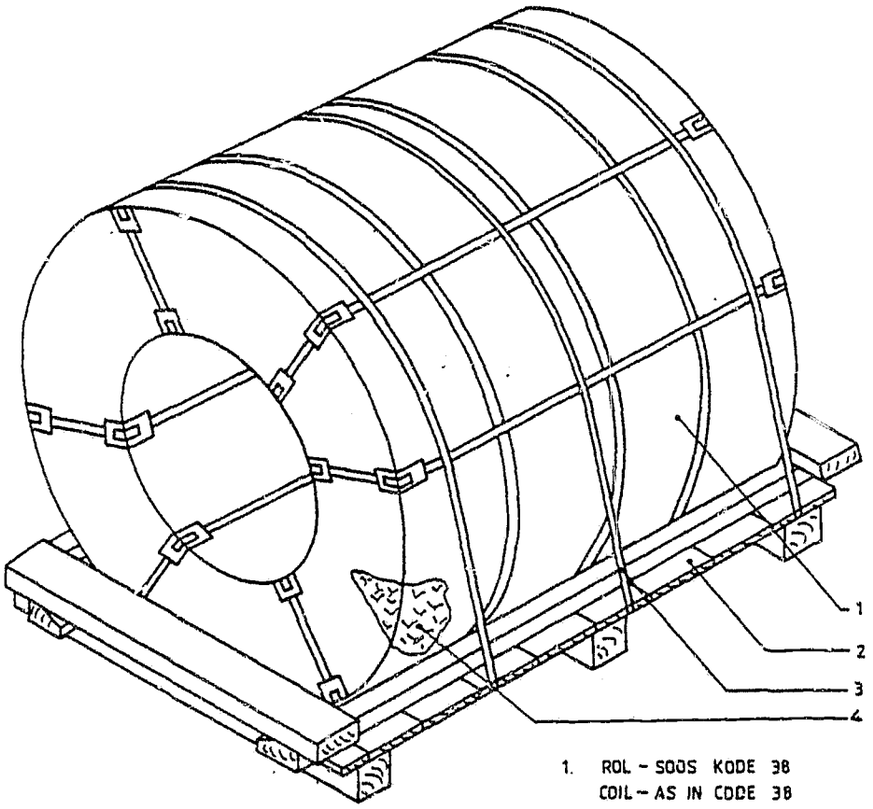
KODE / CODE 34

KLEURPLAATROLLE/COLOUR COATED COILS

Beskermde verpakking met papier horisontaal op laaibord.
Protective packing with paper horizontally on pallet.

NOTA / NOTE:

ALLEENLIK VIR PADVERVOER.
FOR ROAD TRANSPORT ONLY.



1. ROL – SOOS KODE 38
   COIL – AS IN CODE 38
2. LAAIBORD
   PALLET
3. BAND
   STRAP
4. WATERAFSTOTENDE PAPIER
   WATER REPELLENT PAPER

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YSKOR BEPERK ISCOR LIMITED

03791284030

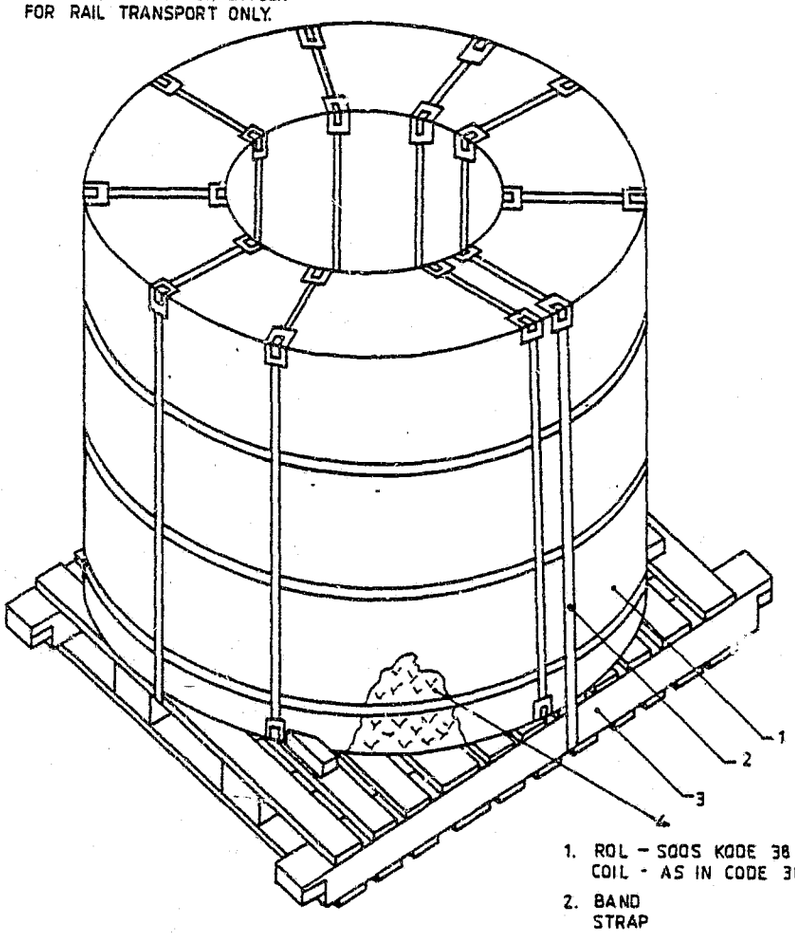
'OE ' CODE 37

PLAATROLLE/COLOUR COATED COILS

Beskermde verpakking met papier vertikaal op laaibord.
Protective packing with paper vertical on pallet.

NOTA / NOTE:

ALLEENLIK VIR SPOORVERVOER
FOR RAIL TRANSPORT ONLY.



1. ROL - SOOS KODE 38
   COIL - AS IN CODE 38
2. BAND
   STRAP
3. LAAIBORD
   PALLET
4. WATERWERENDE PAPIER
   WATER REPELLENT PAPER

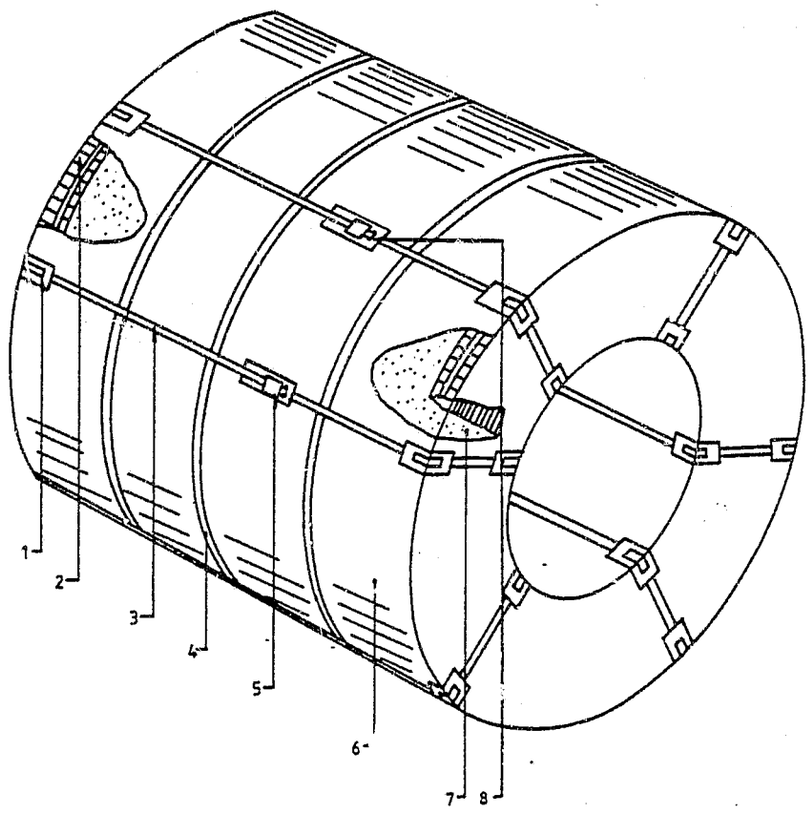
DECLASSIFIED

DECLASSIFIED

KODE/ CODE 38

KLEURPLAATROLLE/COLOUR COATED COILS

Beskermde verpakking met papier.
Protective packing with paper.



KODE / CODE 39
38-OP 'N WIEGDRAER OF DSD TROK (KP 4 & KP 5)
38-ON A CRADLE OR DSD TRUCK (KP 4 & KP 5)

1. HOEKPLAAT
   ANGLE BRACKET
2. KANTDEKPLAAT
   SIDE COVER SHEET
3. OOGBANDE
   EYE TIES
4. OMTREKBANDE
   CIRCUMFERENTIAL STRAPS
5. SEËLS
   SEALS
6. DEKPLAAT
   COVER SHEET
7. WATERWERENDE PAPIER
   WATER REPELLENT PAPER
8. HOEKPLAAT
   ANGLE BRACKET

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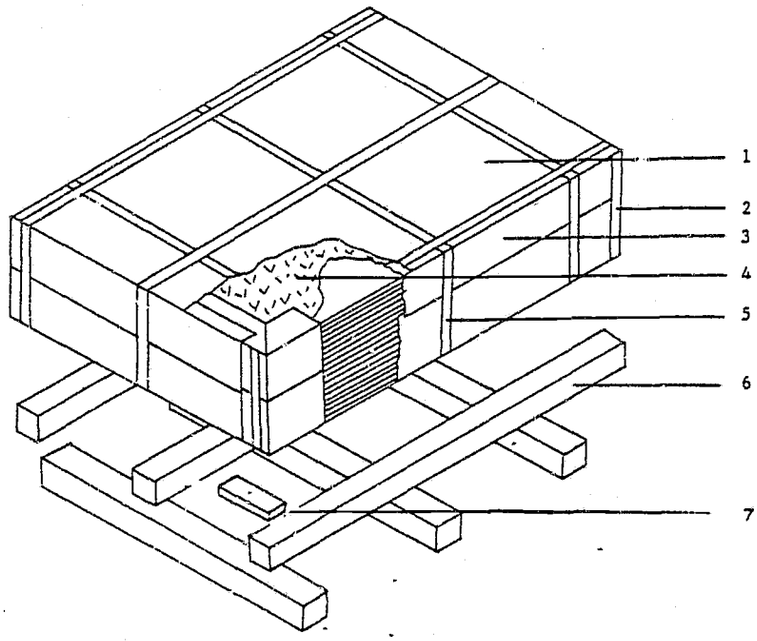
YSKOR BEPERK ISCOR LIMITED

GENERALISED

KODE/CODE 36

KLEURPLAAT STAPELS/COLOUR COATED BUNDLES

Beskermde verpakking met papier op lengte- en dwarsglyplanke.
Protective packing with paper on length and cross wise skids.



MATERIAAL-LENGTE (mm) MATERIAL LENGTH (mm)	AANTAL DWARSGLYPLANKE NO. OF CROSS SKIDS
600 < 1 500	2
1 500 < 2 400	3
2 400 < 3 000	4
3 000 < 3 600	5
3 600 < 4 200	6
4 200 < 4 800	7
4 800 ≤ 6 000	8

MATERIAAL-WYDTE (mm) MATERIAL WIDTH (mm)	AANTAL LENTEGLYPLANKE NO. LENGTH SKIDS
600 < 925	2
925 ≤ 1 600	3

1. DEKPLAAT/COVER SHEET
2. HOEKSTUT/CORNER BRACKET
3. HOEKPLAAT/ANGLE BRACKET
4. WATERWERENDE PAPIER/WATER REPELLENT PAPER
5. BAND/STRAP
6. GLYPLANK/SKID
7. STUTBLOKKIE/SUPPORTING BLOCK

* Lengte en dwarsglyplanke word aanmekaar gespyker en verstewig met stutblokkies voordat dit met bande aan stapel vasgebind word by vloerverpakking.

Length and crosswise skids are nailed together and reinforced with supporting blocks before being strapped to bundle when packed on floor.

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KOUDGEWALSTE CHROMADEK EN TEXTRADEK

B BEDEKKINGSTELSELS

COLD ROLLED CHROMADEK AND TEXTRADEK

COATING SYSTEMS

1. VERFSTELSELS

Die volgende standaard verfstelsels is in die ondergenoemde kleure beskikbaar tensy anders uitdruklik gespesifiseer.

(a) VERFSTELSELS

VERFTIPE/PAINT TYPE	DROË VERF DIKTE DRY PAINT THICKNESS (MIKRON/MICRON)	KOMBINASIE BEPERKINGS/ COMBINATION RESTRICTIONS
Epoksie/Epoxy	5	Nie viniel/Not vinyl
Poliëster/Polyester	20	Geen/None
Standaard ruglaag/ Standard backing coat	15	Slegs Grys/ Grey only
Viniel/Vinyl	18	Geen/None
Plastisol/ Plastisol	180 - 200	Slegs/only Grondlaag/Primer Plastisol/Plastisol of/or Silikoon/Silicon Poliëster/Polyester

DRUKWERK KAN OP KLEURPLAAT GEDOEN WORD ONDERHEWIG AAN ONDERHANDELING.

1. PAINT SYSTEMS

The following standard paint systems in the following colours are available unless otherwise specified.

(a) PAINT SYSTEMS

PRINTING CAN BE DONE ON COLOUR COATED MATERIAL SUBJECT TO NEGOTIATION.

(b) STANDAARD VERFKLEURE

(b) STANDARD PAINT COLOURS

KODE/CODE	KLEUR/COLOUR	AANWENDING BEPERKINGS/ APPLICATION RESTRICTIONS
SABS 1091 D18	Aalwyngroen / Aloe Green	Geen / None
" F07	Asuurblou / Azure Blue	"
" R03	Buffelbruin / Buffalo Brown	"
" C59	Sandsteenbeige / Sandstone Beige	"
" G24	Duifgrys / Dove Grey	"
" C37	Vosbruin / Chestnut Brown	"
" G69	Kalkklipwit / Lime White	"
" A04	Okerrooi / Ochre Red	"
" E18	Brandsegroen / Surf Green	"
-	Wit / White	Slegs toebehore Poliëster/ Appliance Polyester only
-	Rypwit / Frost White	Geen / None
Plastisol/Plastisol	Binnenshuis alle standaard kleure/ Internal all standard colours	Slegs grondlaag, plastisol of silikoon poliëster ruglaag/ Only primer, plastisol or silicon polyester backing coats
	*Buitenshuis slegs Kalkwit, Rypwit en Sandsteenbeige/ Exterior only Lime, White, Frost white or Sandstone beige	Met slegs die volgende ruglae: Plastisol of Silikoon poliëster/ With the following backing coats only: Plastisol or Silicon Polyester

° Vir beskerming van voorafbedekte oppervlaktes kan dit met plastiek bedek word om beskadiging van verfoppervlakte te verhoed - op aansoek

* Ander standaard kleure - op aansoek

° For protection of coated area a plastic film may be specified to prevent damage of paint area - on application

* Other standard colours - on application

B. BEDEKKINGSTELSELS (vervolg)
COATING SYSTEMS (continued)

2. FOELIEBEDEKKINGS
2.1 Standaard foeliebedekkings is in die volgende afwerkings en wydtes beskikbaar.
(a) Poli-Viniel-Chloried samestellings (vir binnenshuise aanwending alleenlik).

2. FILM COATINGS
2.1 Standard film coatings are available in the following finishes and widths.
(a) Poly-Vinyl-Chloride combinations (for interior use only).

AFWERKING/FINISH	KLEUR/COLOUR[1])	STANDAARDWYDTES ° STANDARD WIDTHS (mm)
Houtgrein / Woodgrain	Sapele	680
	Ligte okkerneut / Light Walnut	
	Eik/Oak	
	Tambotie	
	Rooshout/Rosewood	
Linne/Linen	Bruin Tweed/Brown Tweed	750
	Grys Linne/Grey Linen	1225
Marmer/Marble	Perliet/Pearlite	
	Sorbiet/Sorbite	
	Bainiet/Bainite	
Effe kleure/ Plain colours	Wit/White	
	Wit/White (SAL)	
	Swart/Black	

° ANDER WYDTES: .....
Op aansoek.
(1) Nie standaard kleure ..... op aansoek.

° OTHER WIDTHS ...
On application.
(1) Non standard colours ..... on application.

(b) Kombinansies van foeliebedekking stelsels

(b) Combinations of film coated Systems

BEDEKKINGSTIPE/ COATING TYPE	BOKANT/ TOPSIDE	RUGKANT/ BACKSIDE
P.V.C. Foelie/Film	PVC	Standaard ruglaag/Standard backing coat Deursigtige laag/Clear coat

3. VERFGLANSREEKS:
Standaard 30% by 60°
Ander - op aansoek.

3. PAINT GLOSS RANGE
Standard 30% at 60°
Other - on application.

1981-04-01

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1979-06-01

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KOUDGEWALSTE CHROMADEK EN TEKTRADEK / COLD ROLLED CHROMADEK AND TEXTRADEK

C. STANDAARDVERVAARDIGINGSPRAKTYK / STANDARD MANUFACTURING PRACTICE

1. OMVANG / SCOPE

Koudgewalste Chromadek/Textradek bestaan uit daardie groep platprodukte (koudgewalste substraat) wat met 'n reeks verf en/of foelie bedek is.
Die koudgewalste substraat verwys na koudgewalste rolle en smalband uitgegloei, getemperwals, geinspekteer en na dikte teruggesny. Die substraat is spesiaal geselekteer en chemies behandel om bedekte koudgewalste fynplaat en/of smalband met 'n hoë kwaliteit afwerking te voorsien.
Die beskikbare groottes is beperk tot die wat in die wydte en dikte tabel voorkom. (Verwys bladsy S2 paragraaf 1.)

Cold Rolled Chromadek/Textradek comprise that group flat sheets (cold rolled substrate) coated with a range of paints or PVC films.

Cold rolled substrate refer to cold rolled coils and slit strip annealed, temperrolled, inspected and cut back to thickness. The substrate is specially selected and chemically treated to ensure high quality finished cold rolled sheets and/or slit strip.
The available sizes are limited to those shown in the width and thickness table. (Refer page S2 paragraph 1.)

2. KWALITEIT / QUALITY

2.1 Handelskwaliteit
Wanneer Handelskwaliteit Koudgewalste Smalband/Fynplaat bestel word, is die volgende analise en toetse, van toepassing.

2.2 Chemiese Analise
(Gietpotanalise)
Handelskwaliteit word gewoonlik vervaardig uit staal met 'n lae koolstofinhoud (0,15% maks.).

2.3 Buigtoetse (Slegs op basismetaal)
Vir enige koolstofreeks wat nie die maksimum van 0,15% oorskry nie, behoort die toetsmonster by kamertemperatuur in enige rigting plat op sigself gebuig te kan word. Daar behoort geen geredelik sigbare krake op enige gebuigde oppervlak sigbaar te wees nie. Krake op die gesnyde kante van die monster en growwe tekstuur word egter buite rekening gelaat.

2.1 Commercial Quality
When Commercial Quality Cold Rolled Slit Strip/Sheet is specified, the following analysis and tests are applicable.

2.2 Chemical Analysis
(Ladle Analysis)
Commercial Quality is normally supplied in a low carbon steel (0,15% max.).

2.3 Bend Tests (On base metal only)
For any carbon range, the maximum of which does not exceed 0,15%, a test specimen should stand being bent flat on itself in any direction at room temperature. There should be no readily visible cracks along any bend, but cracks at sheared edges of the specimen and coarse grain are disregarded.

3. GROOTTEREEKS / RANGE OF SIZES

STANDAARD-DIKTES/ STANDARD THICKNESS	FYNPLAAT / SHEETS				SMALBAND/ § SLIT STRIP §
	WYDTE/WIDTH	LENGTE / LENGTH [1]			
	ROLLE EN GESNYDE LENGTES / COILS AND CUT LENGTHS	HANDELSKWALITEIT EN STRUKTUUR GRADE/ COMMERCIAL QUALITY AND STRUCTURAL GRADES	TREKKWALITEIT/ DRAWING QUALITY	ALLE KWALITEITE/ ALL QUALITIES	WYDTE / WIDTH
			WYDTES / WIDTHS		
		< 800 mm	< 800 mm	≥ 800 mm	
mm	mm	m	m	m	mm
2,00	600	1,0 tot/to 5,0	1,0 tot/to 4,0	1,0 tot/to 5,0	150 tot/to < 600
1,60	tot/to				
1,20	1600				
1,00		1,0 tot/to 4,3	1,0 tot/to 3,35		
0,80	600 tot/to 1500				
0,60	600 tot/to 1350	1,0 tot/to 3,65	1,0 tot/to 3,0		
0,50	600 tot/to 1225		1,0 tot/to 2,5		150 tot/to < 400
0,40	600 tot/to 1000	1,0 tot/to 2,5		1,0 tot/to 2,5	

§ Rolle alleenlik
ROLLE: Binnediameter ongeveer 510 mm.
(1) Trappe van 25 mm.

§ Coils only.
COILS: Inside diameter approximately 510 mm
(1) Steps of 25 mm.

4. TOLERANSIES/BONDELS
TOLERANCES/BUNDLES

4.1 (a) Koud Gewalste Fynplaat/Smalband word gewals in millimeter diktes.

(b) Die normale digtheid van staal vir 1 vierkante meter van 1 mm dik = 7,85 kg.
Koudgewalste Fynplaat/Smalband word verkoop teen 'n prys per ton.
Om massa vanaf dikte te bereken moet kroon en oor toleransies op wydte en lengte in berekening gebring word dan is die basis van berekening:
1 vierkante meter van 1 millimeter dik = 8,039 kg.

4.1 (a) Cold Rolled Sheet/Slit Strip are rolled to millimeter thicknesses.

(b) The normal density of steel 1 square meter of sheet 1 mm thick = 7,85 kg.

Cold Rolled Sheet/Slit Strip is sold on a price per ton basis.
To convert mass from thickness taking into account crown and over tolerance on width and length the following formula applies.

1 square meter of sheet 1 millimeter thick = 8,039 kg.

4.2 Diktetoleransies

4.2 Thickness Tolerances

4.2.1 Rolle, Smalband en Gesnyde Lengtes

4.2.1 Coils, Slit Strip and Cut Lengths

GESPESIFISEERDE DIKTE (mm) SPECIFIED THICKNESS (mm)			
# DIKTETOLERANSIES IN mm BO (+) EN ONDER (-) # THICKNESS TOLERANCES IN mm OVER (+) AND UNDER (-)			
> 1,4 TOT/TO 2,0	1,0 TOT/TO 1,4	0,50 TOT/TO < 1,0	0,35 TOT/TO < 0,5
± 0,13	± 0,10	± 0,08	± 0,05

Diktes word gemeet by enige punt op die plaat minstens 20 mm van 'n kant af.

Thickness is measured at any point on the sheet not less than 20 mm from a side edge.

4.3 Wydtetoleransies (Smalband 250 -< 600 mm)
Die volgende afwykings op gespesifiseerde wydtes is toelaatbaar:

4.3 Width Tolerances (Slit Strip 250 - < 600 mm)
The following variations on specified widths are allowed:

WYDTES mm/WIDTHS mm			
≥ 150 - 225	225 - < 300	300 - < 500	500 - < 600
AFWYKINGS BO (+) EN ONDER (-) mm VARIATIONS OVER (+) AND UNDER (-) mm			
0,20	0,30	0,70	1,00

4.4 Wydte- en Lengtetoleransies
(Fynplaat/Rolle 600 mm)
(nie haaksgesny nie)

4.4 Width and Length Tolerances
(Sheets/Coils 600 mm)
(not resquared)

WYDTE/WIDTH		LENGTE/LENGTH	
GESPESIFISEERDE WYDTE (mm)	TOLERANSIE BO GESPESIFISEERDE WYDTE	GESPESIFISEERDE LENGTE (mm)	TOLERANSIE BO GESPESIFISEERDE LENGTE (mm)
SPECIFIED WIDTH (mm)	TOLERANCE OVER SPECIFIED WIDTH	SPECIFIED LENGTH	TOLERANCE OVER SPECIFIED LENGTH (mm)
600 - 750	3	< 1 500	6
> 750 - 1 225	5	1 500 - 2 400	13
> 1 225 - 1 525	6	> 2 400 - 3 500	19
> 1 525 - 1 600	8	> 3 500 - 4 000	25
		> 4 000 - 5 000	32

Opmerking:
Wydte- en lengtetoleransie niks onder nie.

Note:
Width and length tolerance nothing under.

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4. TOLERANSIES/BONDELS (vervolg) TOLERANCES/BUNDLES (continued)

4.5 Kromming toleransies

Kromming is die grootste afwyking tussen 'n snykant en 'n reguit lyn, gemeet met 'n rei tussen rei tussen die uitholkant en 'n reguit lyn.

4.5.1 Rolle: (≥ 600 mm wyd)
25 mm in enige 6000 mm

4.5.2 Smalband
≥ 300 - < 600 mm wyd - 25 mm in enige 6000 mm.
< 300 mm wyd - 6 mm in enige 2500 mm.

4.5.3 Gesnyde Lengtes (Nie haakgesny nie)
0,4% x Lengte

4.6 Nie-haaks-toleransie (Gesnyde Lengtes) (Nie haaksgesny nie)
Nie-haaks is die grootste afwyking tussen 'n kant en 'n reguit lyn wat reghoekig loop vanuit een hoek. Dit kan ook verkry word deur die verskil in oorhoeksmate te meet. Die nie-haaks-afwyking is die helfte van die verskil. Die toleransie vir fynplaat van alle diktes en alle groottes is 1,0% van die wydte.

4.5 Camber Tolerances
Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straight edge.

4.5.1 Coils: (≥ 600 mm wide)
25 mm in any 6000 mm

4.5.2 Slit Strip
≥ 300 - < 600 mm wide - 25 mm in any 6000 mm.
< 300 mm wide - 6 mm in any 2500 mm.

4.5.3 Cut Lengths (Not resquared)
0,4% x Length

4.6 Out-of-square tolerance (Cut Lengths) (Not resquared)
Out-of-square is the greatest deviation of an edge from a straight line at right angles to a side and touching one corner. It is also obtained by measuring the difference between the diagonals of the sheet. The out-of-square deviation is one half of the difference. The tolerance for sheets of all thicknesses and all sizes is 1,0% of the width.

4.7 Platheidstoleransies (Gesnyde Lengtes)

4.7 Flatness Tolerances (Cut Lengths)

DIF MAKSIMUM AFWYKING VAN "N HORISONTALE PLAT OPPERVLAK/
THE MAXIMUM DEVIATION FROM A HORIZONTAL FLAT SURFACE

GESPESIFISEERDE DIKTE (mm) SPECIFIED THICKNESS (mm)	GESPESIFISEERDE WYDTE (mm) SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE (mm) SPECIFIED LENGTH (mm)	PLATHEIDSTOLERANSIE (mm) FLATNESS TOLERANCE (mm)
≥ 0,70	< 1225	3000	3
	≥ 1225	3000	6
< 0,70	< 900	3000	6
	≥ 900	3000	10

4.8 Ander Kwaliteite as Handelskwaliteit
Tensy anders ooreengekom, word ander kwaliteite as Handelskwaliteite in ooreenstemming met die vereistes van die betrokke spesifikasie voorsien.

4.9 Kantsny
Voorsiening moet in die bestelde wydte gemaak word vir addisionele kantsny om voorsiening te maak vir kantsny na foelie-bedekking.

4.8 Other Qualities than Commercial Quality
Unless otherwise agreed other qualities than Commercial Quality will be supplied according to the relevant specification.

4.9 Side trimming
Allowance must be made in the ordered width to compensate for side trimming after lamination.

5.1 Oormaat of Ondermaat

Vir elke item van 'n bestelling behou ons ons die reg voor om materiaal te voorsien binne die toleransies soos hieronder aangedui:-

MASSA VAN BESTELDE ITEM (TON)/ MASS OF ORDERED ITEM (TONS)	OORMAAT (+) ONDERMAAT (-)/ OVERAGE (+) UNDERAGE (-)
	TON
5 ≤ 10	1 - 1
10 ≤ 20	2 - 2
20 ≤ 40	2,5 - 2,5
40 ≤ 100	5 - 5
≥ 100	10 - 10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransies wees.

5.2.1 Saambind in bondels

(a) Gesnyde Lengtes

Kleurplaat word verpak in bondels met beskermende verpakking (insluitende hoeksteenstukke en dekplaat) met waterdigte papier op oorlangse glyplanke (Verwys skets op bladsy P5).

(i) Vir wydtes ≤ 1225 mm

Ongeveer 1,25 ton
Ongeveer 2,5 ton
Ongeveer 4 ton
Ongeveer 5 ton

(ii) Vir wydtes > 1225 mm

Ongeveer 5 ton

Die klant se naam en versendingsadres word op die boonste plaat van elke saamgestelde bondel aangebring. Wanneer bondelgroottes van 1,25 en 2,5 ton bestel word vir versending na 'n klant, behou ons ons die reg voor om 'n aantal kleiner bondels saam te bind in een gesamentlike bondel van ongeveer 5,00 ton. In sulke gevalle word die klant se naam en versendingsadres slegs op die boonste bondel aangebring, terwyl die kleiner bondels so gemerk word dat dit maklik met die boonste bondel vereenselwig kan word. Klante moet op die bestelling aandui indien hulle enige probleme ondervind met hierdie saamgestelde bondels.

(b) Rolle

Kleurplaat in rolle word toegedraai in waterdigte papier en afvalplate wat omgebuig word. (Verwys skets op bladsy P5). Rolle word in groepe saam geweeg, en die gemiddelde massa bepaal deur die getal, is nie noodwendig die werklike massa van elke afsonderlike rol nie.

5.1 Overage or Underage

For each item on an order we reserve the right to supply within the tolerances given below:-

Where a minimum or the overage or maximum quantity is specified the applicalhe plus and minus tolerances.

5.2.1 Bundling

(a) Cut Lengths

Colour coated sheets are protectively packed in bundles (including corner brackets and cover sheet) with waterproof paper on lengthwise skids (Refer drawing on page P5).

(i) For widths≤1225 mm

Approximately 1,25 tons
Approximately 2,5 tons
Approximately 4 tons
Approximately 5 tons

(ii) For widths>1225 mm

Approximately 5 tons

The customer's name and consignment address are indicated on the top sheet of each composite bundle. When bundle sizes of approximately 1,25 and 2,50 tons are ordered for dispatch to one customer, we reserve the right of making up composite bundles up to approximately 5,00 tons by strapping together a number of the smaller bundles. In such cases the customer's name and consignment address are indicated on the top bundle only and each of the smaller bundles is marked so as to associate it with the top bundle. Customers should indicate on the order if any difficulties are experienced with composite bundels.

(b) Coils

Colour/coated sheets in coils are wrapped in waterproof paper and waster sheets bend over. (Refer drawing on page P5). Coils are weighed in groups, and the mass of the group averaged over the number of coils. This average mass is not intended to be the actual mass of each separate coil.

DECONTROLLED

5.2.1 Saambind in bondels (Vervolg)

(c) Smalband in Rolle

(i) Enkelrolle of bondels-rolle kan vir vervoerdoeleindes met staalband saamgebind word in saamgestelde bondels-rolle. Die staalbande wat sulke saamgestelde bondels bind, kan deur die geadresseerde vir aflaaidoeleindes gesny word.

(ii) Bondels-rolle word geweeg, en uit die getal rolle per bondel word 'n gemiddelde massa per rol bepaal. Die gemiddelde massa is nie noodwendig die werklike massa van enige rol nie.

5.2.2 MERKING

(a) Gesnyde Lengtes (<4,5mm dik)

Die boonste plaat van elke bondel word gemerk met die graad- of kwaliteitsimbool, dikte, lengte, wydte, en benaderde getal plate in die bondel.

(b) Rolle

Die kwaliteit, wydte en dikte word op elke rol, aangebring.

(c) Smalband

Elke bondel rolle word gemerk met die kwaliteit, wydte en dikte.

Opmerking: Wanneer 'n analisesertifikaat of 'n analise- en toetssertifikaat vereis word, sal die "gietnommer" op die bondel/rol aangetoon word.

5.3 Massa van Rolle

Bestellings vir rolle met 'n gespesifiseerde presiese massa word nie aanvaar nie. Rolle kan bestel word tot 'n gespesifiseerde maksimum massa volgens bladsye P3. Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word sal versending van die bestelling soos volg geskied:

(a) Minstens 80% in volmassarolle.

(b) Hoogstens 20% in ligmassarolle.

'Volmassarolle'

Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, word rolle met 'n massa van minstens 65% van daardie maksimum massa gelewer.

'Ligmassarolle'

Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, is 'ligmassarolle', rolle met 'n massa van minder as 'volmassarolle' maar met minstens 25% van die maksimum massa, hetsy gespesifiseer of omgereken.

5.4 Inspeksie

Rolle

Die inspeksie van rolle verskaf nie dieselfde geleentheid om defekte af te keur soos in die geval van gesnyde lengtes nie. Defekte gedeeltes sal tot 'n minimum beperk word en die gemiddelde ongesorteerde opbrengs sal nie minder as 97,5% op elke afsonderlike bestelling wees nie.

'n Ongesorteerde opbrengs van 95% per individuele rol word gewaarborg en indien dit nie verkry word nie, moet die oorblywende gedeelte van sodanige rol sowel as die materiaal gesny van die rol apart gehou word, wat as 'n afsonderlike eis hanteer sal word.

5.5 Seile

Alle materiaal versend deur die Werke sal deur seile bedek wees tydens vervoer.

5.2.1 Bundling (Continued)

(c) Slit Strip in Coils

(i) Individual or bundles of coils may be strapped together to form composite bundles of coils for transporting purposes. Bands securing such composite coils can be cut by consignees for off-loading purposes.

(ii) Coils are weighed in bundles and the mass averaged over the number of coils in the bundle. This average mass is not intended to be the actual mass of any individual coil.

5.2.2 MARKING

(a) Cut Lengths (<4,5mm thick)

The top sheet of each bundle will be marked to indicate grade or quality symbol, thickness, length, width and approximate number of sheets.

(b) Coils

Each coil is marked with the quality width and thickness.

(c) Slit Strip

Each bundle of coils is marked with the quality, width and thickness.

Note: When an analysis certificate or analysis and test certificate is required, the "Cast number" will be indicated on the bundle/coil. thickness.

5.3 Mass of Coils

Orders for coils to a specific exact mass are not accepted. Coils may be ordered with a specific maximum mass in accordance with pages P3.
When coils are ordered to a specified maximum mass, the order is despatched as follows:

(a) Not less than 80% in full mass coils.

(b) Not more than 20% in light mass coils.

'Full Mass Coils'

When coils to specified maximum mass are ordered, then coils are supplied with a mass of not less than 65% of that maximum mass.

'Light Mass Coils'

When coils are ordered to a specified maximum mass, then 'Light Mass Coils' are coils with a mass of less than 'Full Mass Coils' but not less than 25% of the maximum mass specified or converted.

5.4 Inspection

Coils

Inspection of coils does not afford the same opportunity to reject defects as in the case of cut lengths. Defective portions will be kept to a minimum and the average unassorted yield will not be less than 97,5% on each separate order.

An unassorted yield of 95% per individual coil is guaranteed and if this is not obtained the remainder of such coil and the material cut from such coil should be kept separately and will be treated as a separate claim.

5.5 Tarpaulins

All material dispatched by the Works will be covered by tarpaulins during transit.

DECLASSIFIED S.P.E. 140

YSKOR BEPERK ISCOR LIMITED

VERSINKTE FYNPLAAT

ROLLE - SMALBAND - LENGTES

GALVANISED SHEETS

COILS - SLIT STRIP - LENGTHS

DECLASSIFIED

VERSINKTE SMALBAND/FYNPLAAT EN ROLLE GALVANISED SLIT STRIP/SHEETS AND COILS

VOORWOORD
PREFACE

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.
3. Tensy anders bestel, is alle items onderworpe aan 'n oormaat of ondermaat - verwys bladsy S6, paragraaf 5.1.
4. Smalband/Fynplaat en Rolle word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die geykte massameter/massameterbrug by die Werke. Enige verwysing na die getal rolle op die faktuur of vragbrief is slegs vir inligting.
5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.
6. Normale toetsing en inspeksie, soos in die verskillende spesifikasies uiteengesit, word uitgevoer. Wanneer bykomende inspeksie en/of toetsing verlang word sal 'n ekstra gehef word - verwys bladsy P6 par. 8.
7. Pryse en ekstras is dié wat op die versendingsdatum geld, en is onderworpe aan veranderings sonder kennisgewing.
8. Wanneer materiaal bestel word, moet klante altyd die eindgebruik spesifiseer.
9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.
10. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.
11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

PREFACE

1. Orders are accepted in accordance with our General Conditons of Sale and the provisions of this S.P.E.
2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.
3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - refer page S6, paragraph 5.1.
4. Slit Strip/Sheets and Coils are sold at a price per metric ton (1 000 kilograms) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of coils on the invoice or consignment note is for information only.
5. Extras and deductions quoted herein are per metric ton, unless otherwise stated. Each extra or deduction is separate and distinct.
6. Normal testing and inspection as outlined in the various specifications are carried out. When additional inspection and/or testing is required, extras will be charged - refer page P6 par. 8.
7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.
8. When ordering material customers should always state the end use.
9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.
10. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.
11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD

A.	**PRYSE**	**BLADSY**
1.	Basisprys	P1
2.	Hoeveelheidsekstras/Aftrekkings	P1
3.	Grootte-ekstras	P2 & P3
4.	Versinkingsekstras	P3
5.	Kwaliteitsekstras	P4
6.	Verwerkingsekstras	P5
7.	Oormaat/Ondermaat Ekstras	P6
8.	Metallurgiese Vereistes	P6
9.	Verpakkingsekstras	P7 & P8
B.	**STANDAARDVERVAARDIGINGSPRAKTYK**	
1.	Omvang/Kwaliteit	S1 & S2
2.	Toleransies	S3 tot S5
3.	Algemeen	S6 & S7

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3.	Size Extras	P2 & P3
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5.	Quality Extras	P4
6.	Processing Extras	P5
7.	Overage/Underage Extras	P6
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2.	Tolerances	S3 to S5
3.	General	S6 & S7

S.P.E. 140

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Aflewerингsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK:
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - spesifiseer
   (g) Oppervlak afwerking
   (h) Eind - gebruike
   (i) Bedekkingsisteem

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Wydte en dikte
4. Lengte
5. Sinkdeklaagekstras
6. Kwaliteit
7. Spesiale verwerking
8. Beperking op oor-/ondermaat
9. Metallurgiese vereistes
10. Verpakkingsekstras
11. Invoerheffing (R10-25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Mariasburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT:
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - specify
   (g) Surface finish
   (h) End uses
   (i) Coating system

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Width and Thickness
4. Length
5. Zinc coating extras
6. Quality
7. Special processing
8. Restriction on over-/underage
9. Metallurgical requirements
10. Packing extras
11. Import Levy (R10-25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

1981-10-01 Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated 1980-06-20

GEKANSELLEER

VERSINKTE SNALBAND/FYNPLAAT EN ROLLE

GALVANISED SLIT STRIP/SHEETS AND COILS

A. PRYSE/ PRICES

1. BASISPRYS/ BASIS PRICE R515-50

(a) PWV[1]) -gebied: pryse per 1000 kg v.o.s. Yskorwerke, Vanderbijlpark. (Sylyn 1414, Bijlkor) plus padvervoer/spoorvrag

(b) Buite PWV[1]) -gebied: prys per 1000 kg v.o.s. Germiston plus spoorvrag

1) Verwys Kontrolelys par. C.

(Gebaseer op Handelskwaliteit)

(a) PWV[1]) area: prices per 1 000 kg f.o.r. Iscor Works, Vanderbijlpark. (Siding 1414, Bijlkor) plus cartage/railage.

(b) Outside PWV[1]) area: prices per 1 000 kg f.o.r. Germiston plus railage.

1) Refer Check List par. C

(Based on Commercial Quality)

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS QUANTITY EXTRAS/DEDUCTIONS

2.1 ITEMEKSTRAS/AFTREKKINGS

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.1 ITEM EXTRAS/DEDUCTIONS

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for despatch to one destination at Works convenience.

ITEM[1])	EKSTRA/EXTRA	AFTREKKING/DEDUCTION
TON/TONS	R.c/TON	R.c/TON
2 - < 5	98-75	
5 - < 10	62-35	
10 - < 20	31-20	
20 - < 40	15-60	
40 - < 80	7-75	
80 - < 100	0-00	0-00
100 - < 200		5-20
200 - < 500		7-75
⩾500		15-60

Opmerkings: - Minimum massa per item:

(a) Alle materiaal ⩽ 1225 mm wyd: 10 ton/item (< 10 ton/item beskikbaar vir Handelskwaliteit gesnyde lengtes in standaard wydtes en diktes alleen).

(b) Alle materiaal ⩾ 1225 mm wyd: 20 ton/item (< 20 ton/item op aansoek).

Notes - Minimum mass per item:

(a) All material ⩽ 1225 mm wide: 10 tons/item (< 10 tons/item available for Commercial Quality cut lengths in standard widths and thicknesses only).

(b) All material > 1225 mm wide: 20 tons/item (< 20 tons/item on application).

YSKOR BEPERK. ISCOR LIMITED

VERSINKTE SMALBAND/FYNPLAAT EN ROLLE — GALVANISED SLIT STRIP/SHEETS AND COILS

3. GROOTTE-EKSTRAS/SIZE EXTRAS

3.1 STANDAARDWYDTE- EN DIKTE-EKSTRAS / STANDARD WIDTH AND THICKNESS EXTRAS

3.1.1 SMALBAND IN ROLLE / SLIT STRIP IN COILS

DIKTE NA VERSINKING/THICKNESS AFTER COATING (mm)	WYDTE (mm) - STANDAARD - 5 mm TRAPPE - NIE-STANDAARD - 1 mm TRAPPE/ WIDTH (mm) - STANDARD - 5 mm INCREMENTS - NON-STANDARD - 1 mm INCREMENTS					
	25 - < 50	50 - < 75	75 - < 150	150 - < 250	250 - < 400	400 - < 600
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
3,0	-	-	91-00	82-30	74-65	67-80
(a) 2,8	119-20	102-00	90-05	81-55	73-80	67-05
(a) 2,5	118-55	101-35	89-40	80-75	73-10	66-25
2,2	116-05	98-90	86-90	78-40	70-60	63-90
2,0	113-50	96-40	84-40	75-85	68-15	61-30
1,6	107-70	90-55	78-60	70-00	62-35	55-50
1,4	102-95	85-85	73-95	65-30	57-60	50-70
1,2	99-25	82-10	70-00	61-55	53-70	46-95
1,0	94-30	77-20	65-15	56-60	48-90	42-05
0,8	89-40	72-25	60-30	51-75	43-95	37-15
0,6	82-70	65-50	53-60	45-05	37-45	30-50
0,5	85-70	68-45	56-50	48-35	40-75	33-90
0,4	92-95	75-85	63-95	55-25	47-60	-

(a) Min. wydte 30 mm / Min. width 30 mm

3.1.2 ROLLE EN GESNYDE LENGTES / COILS AND CUT LENGTHS

DIKTE NA VERSINKING/THICKNESS AFTER COATING (mm)	WYDTE (mm) - STANDAARD - x 25 mm TRAPPE - NIE-STANDAARD - 5 mm TRAPPE/ WIDTH (mm) - STANDARD - x 25 mm INCREMENTS - NON-STANDARD - 5 mm INCREMENTS									
	600 - < 800	800 - < 925	925 - < 1000	1000 - < 1200	1200 - < 1500	1500 - 1600				
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
(d)(a) 3,0	61-80	53-45	47-00	48-55	41-30	43-75	37-45	40-50	-	-
(d)(a) 2,8	60-95	52-55	46-10	47-65	40-50	42-95	36-50	39-75	-	-
(d)(a) 2,5	60-30	51-85	45-45	47-00	39-85	42-25	35-70	38-90	-	-
(d)(a) 2,2	57-80	49-40	43-00	44-50	37-45	39-80	33-35	36-50	-	-
(a) 2,0	55-25	46-95	40-50	42-05	34-80	37-20	30-60	34-00	-	-
1,6	49-45	41-15	34-65	36-25	29-05	31-55	24-95	28-15	26-65	33-35
1,4	44-75	36-40	30-00	31-60	24-25	26-60	20-30	23-45	21-75	27-70
1,2	40-95	32-45	26-10	27-65	20-50	22-85	16-45	19-60	17-90	24-80
1,0	36-05	27-65	21-20	22-80	15-70	18-00	11-55	14-75	13-00	19-80
0,8	31-15	22-80	16-40	17-90	10-65	13-05	6-70	9-90	8-15	15-00
(b) 0,6	24-50	16-00	9-60	11-25	3-95	6-45	0-00	3-15	-	-
(a) 0,5	27-90	19-55	13-05	14-65	7-50	9-90	3-40	6-55	-	-
(e) 0,4	33-00	24-75	18-20	19-75	12-60	15-05	-	-	-	-
(c)(e) 0,35	37-00	28-75	22-35	24-25	17-10	19-65	-	-	-	-

Opmerkings:
(a) Maksimum wydte 1 225 mm
(b) Maksimum wydte 1 400 mm
(c) Slegs Rolle
(d) Minimum wydte 740 mm (Wydtes onder 740 mm op aansoek)
(e) Maksimum wydte 1050 mm

Notes:
(a) Maximum width 1 225 mm
(b) Maximum width 1 400 mm
(c) Coils only
(d) Minimum width 740 mm (Widths under 740 mm on application only)
(e) Maximum width 1050 mm

3.2 x NIE-STANDAARDWYDTE-EKSTRAS / NON-STANDARD WIDTH EXTRAS

Vir nie-standaardwydtes geld die ekstras soos in die wydte- en dikte tabel aangetoon (par. 3.1) plus die volgende:-

(a) Smalband - Nie-standaard trappe van 1 mm R7-25
(b) Fynplaat/Rolle - Nie-standaard trappe van 5 mm R7-25

For non-standard widths the extras shown in the width and thickness table (par. 3.1) apply plus the following:-

(a) Slit Strip - Non-standard increments of 1 mm R7-25
(b) Sheets/Coils - Non-standard increments of 5 mm R7-25

3. GROOTTE-EKSTRAS (VERVOLG/SIZE EXTRAS (CONTINUED)

3.3 STANDAARDLENGTE EKSTRAS / 3.3 STANDARD LENGTH EXTRAS

DIKTE NA VERSINKING / THICKNESS AFTER COATING (mm)	WYDTES 600 - 1 600 mm/WIDTHS 600 - 1 600 mm					
	LENGTE/LENGTH					
	TRAPPE VAN 25 mm/INCREMENTS OF 25 mm					
	1,0 - 1,2 m	>1,2 - 1,5 m	>1,5 - 2,5 m	>2,5 - 3,5 m	>3,5 - 4,5 m	>4,5 - 5,0 m
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
1,6 - 3,0	21-05	17-10	12-85	12-85	15-50	19-55
0,8 - < 1,6	21-90	18-00	13-75	13-75	16-40	20-40
0,6 - < 0,8	23-45	19-55	15-30	15-30	17-90	21-90
0,5 - < 0,6	24-95	21-05	16-90	16-90	19-5	-
0,4 - < 0,5	27-45	23-50	19-45	-	-	-

LENGTE BEPERKINGS
Verwys bladsy S3, par. 3

LENGTH LIMITATIONS
Refer page S3, par. 3

3.4 NIE-STANDAARDLENGTE-EKSTRA
Vir nie-standaardlengtes geld die ekstras soos in die standaardlengte tabel (paragraaf 3.3) plus die volgende:-
Nie-standaard trappe van 5 mm R3-15
Verwys S4 Paragraaf 4.4

3.4 NON-STANDARD LENGTH EXTRA
For non-standard lengths the extras shown in the standard length table (paragraph 3.3) apply plus the following:-
Non-standard increments of 5 mm R3-15
Refer S4 Paragraph 4.4

4. VERSINKINGSEKSTRAS/ COATING EXTRAS

Versinkte fynplaat word vervaardig met sinkdeklae van verskillende diktes, en die volgende ekstras is van toepassing:-

Galvanised sheet is processed with different coating masses of zinc, for which the following extras apply:-

DIKTE NA VERSINKING/ THICKNESS AFTER COATING (mm)	SMALBAND/SLIT STRIP		FYNPLAAT ROLLE/ COILED SHEETS				FYNPLAAT GESNYDE LENGTES/ SHEET CUT LENGTHS			
	DEKLAAGAANDUIDING / COATING DESIGNATION									
	G185 3155	G275 2069	G185 3155	G275 2069	G425 2135	G650 2072	G185 3155	G275 2069	G425 2135	G650 2072
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
3,0	13-10	18-15	10-90	15-60	24-30	36-50	12-60	17-50	24-70	37-15
2,8	13-70	19-00	12-95	17-95	26-85	38-15	13-20	18-30	27-30	38-85
2,5	14-80	22-10	14-05	19-35	28-90	42-80	14-20	19-75	29-45	43-55
2,2	17-80	24-05	15-25	22-70	33-05	48-15	15-50	23-10	33-65	50-60
2,0	18-95	27-30	17-90	24-20	36-80	52-90	18-20	24-65	37-45	55-40
1,6	23-70	33-25	22-40	29-90	45-95	66-15	22-80	31-95	46-75	67-35
1,4	27-60	38-00	24-50	34-30	51-75	75-40	24-95	36-50	52-70	76-80
1,2	32-45	43-85	28-90	41-35	60-50	86-60	29-40	42-10	61-60	89-75
1,0	38-00	52-85	34-30	48-35	71-55	103-90	36-50	50-80	74-40	107-35
0,8	47-60	66-40	43-40	61-20	89-45	127-95	45-75	62-30	91-10	131-90
0,6	64-65	89-10	58-00	81-05	118-00	166-75	60-60	84-10	121-70	171-30
0,5	76-55	105-55	70-75	98-15	140-90	197-90	72-00	99-90	143-45	202-95
0,4	95-95	132-70	89-10	122-20	-	-	90-70	124-40	-	-
0,35	-	-	106-35	143-50	-	-	-	-	-	-

Verwys bl. S4 para. 4.2.1.

Refer p. S4 para 4.2.1.

Opmerking:
Rolle oor en gelyk aan 600 mm bestel met 'n deklaag van oor G275 vir eindverbruik strooksny na Smalband op aansoek alleenlik.

Note:
Coils over and equal to 600 mm ordered with coatings exceeding G275 for end use slitting to Slit Strip on application only.

5. KWALITEITSEKSTRAS/QUALITY EXTRAS

YSKOR-SPESIFIKASIES ISCOR SPECIFICATIONS

KODE/ CODE		EKSTRA/ EXTRA
123	Handelskwaliteit/Commercial Quality (C 0,15% maks./max.)	R.c. 0-00
184	SAE/AISI 1012 (C 0,10 - 0,15% Mn 0,30 - 0,60%)	9-50
601	W01 (Welding Quality C 0,08% max. Mn 0,25 - 0,50%)	21-00
086	Trekkwaliteit/Drawing Quality (C 0,08% maks./max.) Deklaagaanduiding G275 alleenlik/ Coating designation G275 only	28-75
215	Sluitvoeg kwaliteit - Min. dikte 0,4 mm/ Lock Forming Quality - Min. thickness 0,4 mm Maksimum dikte 2 mm Maximum thickness 2 mm Deklaagaanduiding G275 alleenlik/ Coating designation G275 only	15-50
123 2106	Handelskwaliteit in volhard toestand ($\geqslant$80RB) Commercial Quality in full hard condition ($\geqslant$80RB) Beperkings/Limitations Dikte/Thickness Slegs/Only 0,5 mm en/and 0,6 mm ander diktes tot 1,0 mm maksimum op aansoek other thicknesses up to 1,0 mm maximum - on application	13-75

1982-01-01 Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated 1981-10-01

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6. SPESIALE VERWERKING/SPECIAL PROCESSING

Kode/ Code	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER / APPLICABLE ONLY IF SPECIFIED ON ORDER		EKSTRA/ EXTRA R.c.
3678 3677	6.1 OPPERVLAKAFWERKING (a) Gewone Blomvoorkoms * (b) Platgewalste gewone Sinkblompatroon 2,0 mm maks.	6.1 SURFACE FINISHES (a) Regular Spangle * (b) Flattened regular Spangle 2,0 mm max.	6-00 10-25
	* Opmerking: Platgewalste gewone Sinkblompatroon kan alleenlik 'n passivering behandeling gegee word binne die wydte reeks 600 mm - 1225 mm en dikte reeks 0,5 mm tot 2,0 mm (Verwys bladsy S.2 par. 2.4). Vir trekkwaliteite kan platgewalste gewone sinkblompatroon nie gepassiveerd voorsien word nie.	* Note: Flattened regular spangle can only be given passivation treatment within the width range 600 mm - 1225 mm and thickness range 0,5 mm to 2,0 mm (Refer page S.2 para. 2.4). For drawing qualities, flattened regular spangle cannot be supplied passivated.	
2015	6.2 WEEG VAN INDIVIDUELE ROLLE/BONDELS EN DIE AANBRING VAN AANGETEKENDE MASSA OP ELKE BONDEL/ROL	6.2 WEIGHING OF INDIVIDUAL COILS/ BUNDLES AND MARKING THE RECORDED MASS ON EACH BUNDLE/COIL ...	2-05
2660	6.3 PLATRIG Maksimum dikte 2,0 mm	6.3 LEVELLING Maximum thickness 2,0 mm	1-75
	6.4 FYNPLAAT HERSNY EN/OF HAAKSSNY ≤ 1,6 mm dik maks. lengte 4550 mm / > 1,6 mm dik maks. lengte 3850 mm / maks. wydte 1200 mm /	6.4 SHEETS RESHEARING AND/OR RESQUARING ≤ 1,6 mm thick max. length 4550 mm > 1,6 mm thick max. length 3850 mm max. width 1200 mm	

NOMINALE MASSA PER FYNPLAAT/ NOMINAL MASS PER SHEET (kg)	TWEE KANTE TWO SIDES (2466) R.c.	VIER KANTE FOUR SIDES (2710) R.c.
≤ 3 kg	34-25	40-90
> 3 - < 6 kg	29-55	36-05
6 - < 10 kg	24-70	31-10
10 - < 15 kg	18-05	24-70
15 - < 30 kg	13-00	19-65
30 - < 50 kg	8-25	14-65
> 50 kg	4-90	8-25

2054	6.5 Olie met standaard-olie (indien deur klant gespesifiseer).	6.5 Oiling with standard oils (when specified by customer).	3-80

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7. BEPERKING OP OOR-OF ONDERMAAT TOELATING (Verwys bladsy S6)/ LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE (Refer page S6)

(i)	50% beperking van standaard oor- of ondermaat toelating (2408).....	R 8-80	(i)	50% limitation on standard overage or underage allowance (2408).....	R 8-80
(ii)	Wanneer 2 1/2% oor- of ondermaat van item massa gespesifiseer word (2409). (Slegs van toepassing op items onder 100 ton)	R13-55	(ii)	When 2 1/2% overage or underage of item mass is specified (2409) .... (Applicable only to items under 100 tons)	R13-55
(iii)	(a) Vir gespesifiseerde minimum hoeveelhede (2440)	R 3-50	(iii)	(a) For specified minimum quantities (2440)	R 3-50
	(b) Vir gespesifiseerde maksimum hoeveelhede (2293) ..... (Uitsluitende ekstras vir beperkings op oor- of ondermaat)	R 3-50		(b) For specified maximum quantities (2293) ..... (Excluding extras for restrictions on overage or underage)	R 3-50

8. METALLURGIESE VEREISTES/ METALLURGICAL REQUIREMENTS

	SLEGS VAN TOEPASSING INDIEN OP BESTELLING GESPESIFISEER/ APPLICABLE ONLY IF SPECIFIED ON ORDER		EKSTRA EXTRA
			R.c.
	8.1 Ekstras vir Bywoning van Toetse en Inspeksie deur buite instansies	8.1 Extras for Witnessing of Tests and Inspection by outside authorities	
	8.1.1 Bywoning van Meganiese Toetse	8.1.1 Witnessing of Mechanical Tests	
3312	(a) Deur klant	(a) By customer	4-25
	(b) of sy verteenwoordiger soos:	(b) or his representative such as:	
3313		S.A. Spoorweë/S.A. Railways	2-10
3314		A.B.S.	4-25
3315		General Superintendence	4-25
3316		British Engine and Insurance	4-25
3317		T.U.V.	4-25
	(c) Vir elke bykomende verteenwoordiger	(c) For each additional representative	8-50
	8.1.2 Oppervlakinspeksie	8.1.2 Surface Inspection	
3328	(a) Deur klant	(a) By customer	8-45
	(b) of sy verteenwoordiger soos:	(b) or his representative such as:	
3329		S.A. Spoorweë/S.A. Railways	4-25
3330		A.B.S.	8-45
3331		General Superintendence	8-45
3332		British Engine and Insurance	8-45
3333		T.U.V.	8-45
	(c) Vir elke bykomende verteenwoordiger	(c) For each additional representative	16-90

8.2 TOETS-EN/OF GIETANALISE SERTIFIKATE (Gietpotanalises)/

Van toepassing op Handelskwaliteit Versinkte Fynplaat

8.2 TEST AND/OR CAST ANALYSIS CERTIFICATES (Ladle Analyses)/

Applicable to Commercial Quality Galvanised Sheet

PER ITEM TON(S)	GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2003)	TOETS- EN GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ TEST AND CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2005)
	R.c.	R.c.
0 - 10	4-20	8-25
> 10 - 20	3-50	7-30
> 20 - 30	1-90	4-20
> 30 - 40	1-50	2-85
> 40	0-95	1-70

DECRAZILED

9. VERPAKKINGSEKSTRAS (Betaling volgens bruto massa)/
PACKING EXTRAS (Gross mass charged)

9.1 ROLLE
Rolle is beskikbaar tot 'n maksimum massa soos uiteengesit in die volgende tabel:-
(Klante moet uit die tabel die mees geskikte rolgrootte vir hul behoeftes kies en dit op die bestelling spesifiseer.)

9.1.1 VERPAKKINGSEKSTRAS - ROLLE gemonteer op of sonder wiegdraers.

9.1 COILS
Coils are available to a maximum mass as set out in the following table:-
(Customers should select from the table the coil size best suited to their requirements and specify it on the order.)

9.1.1 PACKING EXTRAS - COILS mounted on or not mounted on cradles.

MATERIAAL WYDTE/ MATERIAL WIDTH (mm)	MASSA VAN ROLLE / MASS OF COILS		MIN WYDTE/ MIN WIDTH (mm)	TIPE VERPAKKING / TYPE OF PACKING					
	MAKS / MAX. KG/MM WYDTE / WIDTH	KODE/ CODE		STANDAARD SONDER BESKERMING/ STANDARD WITHOUT PROTECTION		WATERDIGTE PAPIER / WATERPROOF PAPER		WATERDIGTE PAPIER MET SKROTPLAATBE-DEKKING / WATERPROOF PAPER AND SCRAP SHEET COVERING	
				SONDER WIEG-DRAER / WITHOUT CRADLE	OP WIEG-DRAER / ON CRADLE	SONDER WIEG-DRAER / WITHOUT CRADLE	MET WIEG-DRAER / WITH CRADLE	SONDER WIEG-DRAER / WITHOUT CRADLE	MET WIEG-DRAER / WITH CRADLE
				KODE/ CODE 08 R.c.	KODE/ CODE 09 R.c.	KODE / CODE 18 R.c.	KODE / CODE 19 R.c.	KODE / CODE 38 R.c.	KODE / CODE 39 R.c.
Smalband / Slit Strip 25 - <600	12,50	30	150	0-00	1-35	0-00	1-35	2-10	3-15
	6,25	31	75	4-80	7-60	4-80	7-60	8-95	11-45
	4,17	32	40	9-75	13-75	9-75	13-75	15-75	19-60
	3,13	33	-	14-50	19-90	14-50	19-90	22-35	27-70
	2,50	34	-	19-55	26-30	19-55	26-30	28-95	36-00
	2,08	35	-	24-25	32-40	24-25	32-40	36-00	43-75
Rolle / 600 - 1225	12,50	30	-	0-00	1-35	0-00	1-35	1-50	3-00
	6-25	31	-	3-00	5-80	3-00	5-80	5-95	8-95
	4,17	32	-	5-95	10-05	5-95	10-05	10-55	14-50
	3,13	33	-	9-00	14-35	9-00	14-35	15-15	20-55
	2,50	34	-	12-00	18-65	12-00	18-65	19-65	26-40
	2,08	35	-	15-00	23-20	15-00	23-20	24-25	32-40
	1,79	36	-	18-05	27-40	18-05	27-40	28-70	38-35
	1,56	37	-	21-00	31-65	21-00	31-65	36-05	46-80
Rolle / Coils >1225 - 1600	12,50	30	-	0-00	1-35	0-00	1-35	1-50	3-00
	6,25	31	-	3-60	5-80	3-00	5-80	5-95	8-95
	4,17	32	-	5-95	10-05	5-95	10-05	10-55	14-50

9.1.2 Opmerkings
(i) Rolle op wiegdraers word normaalweg slegs vir Spoorvervoer aangebied en deurgaans met die oog in die breedte van 'n trok gelaai. Rolle sonder wiegdraers word slegs vir padvervoer aangebied en met die oog in die lengte rigting met 'n vragmotor gelaai. Indien wiegdraers vir padvervoer aangevra word moet klant spesifiseer in watter rigting die oog van die rol gelaai moet word.

(ii) Bondelgrootte : Rolle Strookstaal word deur middel van bande in bondels gebind in groottes om by werkepraktyk te pas.
Gespesifiseerde maksimum bondelmassa ..... Op aansoek

(iii) Rolmassa : Die rolmassa hierbo aangetoon is onderworpe aan verandering.

9.1.2 Notes
(i) Coils on cradles are normally for rail transport only and coils are loaded with the eye of the coil tranversely onto the truck.
Coils without cradles are only for road transport and coils are loaded with the eye of the coil lengthwise onto the motortruck.
If cradles for road transport is specified then customer must ensure that the direction of the eye of the coil is specified on the order.

(ii) Bundle Size : Coils Slip Strip are strapped together to form bundles in sizes to suit Works' practice.
Specified maximum bundle mass ..... On application

(iii) Coil mass : The coil mass indicated above is subject to alteration

9. VERPAKKINGSEKSTRAS/AFTREKKINGS (VERVOLG)/
PACKING EXTRAS/DEDUCTIONS (CONTINUED)

Gesnyde lengtes is beskikbaar in die volgende bondelgroottes en tipe verpakking. Die gekwoteerde ekstras is hierop van toepassing. (Klante moet die geskikste bondelgrootte en tipe verpakking vir hul behoeftes kies en dit op die bestelling aandui):-

Cut sheets are available in the following bundle sizes and type of packing for which the quoted extras apply. (Customers should select the bundle size and type of packing best suited to their requirements and state it on the order):-

9.2.1 FYNPLAAT - GESNYDE LENGTES

9.2.1 SHEETS - CUT LENGTHS

TIPE VERPAKKING / TYPE OF PACKING	Verpakkings-Kode / Packing code	MATERIAAL WYDTE / MATERIAL WIDTH (mm)					
		600 - 1225				> 1225 - 1600	
		BONDELMASSA (TON) / BUNDLE MASS (TONS)				BONDELMASSA (TON) / BUNDLE MASS (TONS)	
		KODE / CODE 03 1,25 t R.c.	KODE / CODE 02 2,5 t R.c.	KODE / CODE 10 4,0 t R.c.	KODE / CODE 01 5,0 t R.c.	KODE / CODE 10 4,0 t R.c.	KODE / CODE 01 5,0 t R.c.
1. Standard verpakking met waterdigte papier bedekking op: / Standard packing with waterproof paper covering on:							
(i) Lengte glyplanke / Length-wise skids	15	a) 10-70	4-10	(b) 1-65	(c) 0-85	*	*
(ii) Lengte & dwarsglyplanke / Length & cross-wise skids	16	a) 7-80	2-55	(b) 0-70	(c) 0-00	(b) 0,70	(c) 0-00
2. Kantheskermde verpakking met waterdigte papier met skrotplaat bedekking op / Edge protective packing with waterproof paper with scrap sheet covering on:							
(i) Lengte glyplanke / Length-wise skids	35	a) 12-35	4-90	(b) 2-10	(c) 1-15	*	*
(ii) Lengte en dwarsglyplanke / Length and cross-wise skids	36	a) 10-40	3-95	(b) 1-50	(c) 0-70	(b) 1-75	(c) 0-85

* Nie beskikbaar

OPMERKINGS:

1. Vir diktes ⩽ 0,9 mm en oor 1000 mm tot 1225 mm wyd is verpakkingskodes 05, 15 en 35 nie van toepassing nie. Vir hierdie groottes moet verpakkingskodes 06, 16 of 36 gespesifiseer word.
2. Vir bestelde hoeveelhede wat tussen die massas van twee standaardgroottebondels lê, is die ekstra vir die bondelgrootte met die hoër ekstra van toepassing.
3. Die Korporasie behou hom die reg voor om bondels te lewer waarvan die massa minder is as dié bestelde massa, of om bondels te lewer tot 10% swaarder as die bestelde massa.
4. Min. Plaatgrootte - (b) 0,9 vk. m
   (c) 1,1 vk. m
5. Bondelgroottes:
   (a) Bondelgroottes van 1,25 ton nie beskikbaar t.o.v. trekkwaliteit, trekkwaliteit gestabiliseer, BS1449/1972 KCR1, BS 1449/1972 RCR2 en BS1449/1972 RCR3.

* Not available

NOTES:

1. For thicknesses ⩽ 0,9 mm and over 1000 mm to 1225 mm wide packing codes 05, 15 and 35 do not apply for these sizes packing codes 06, 16 or 36 must be specified.
2. For ordered quantities which lie between the masses of two standard size bundles, the extra for the bundle size bearing the higher extra applies.
3. The Corporation reserves the right to supply bundles which may have a mass less than the ordered bundle mass, or have a mass up to 10% more than the ordered bundle mass.
4. Min. sheet size - (b) 0,9 sq. m
   (c) 1,1 sq. m
5. Bundle sizes:
   (a) Bundle sizes of 1,25 tons are not available i.r.o. drawing quality, drawing quality stabilised, BS1449/1972 KCR1, BS1449/1972 RCR2 and BS1449/1972 RCR3.

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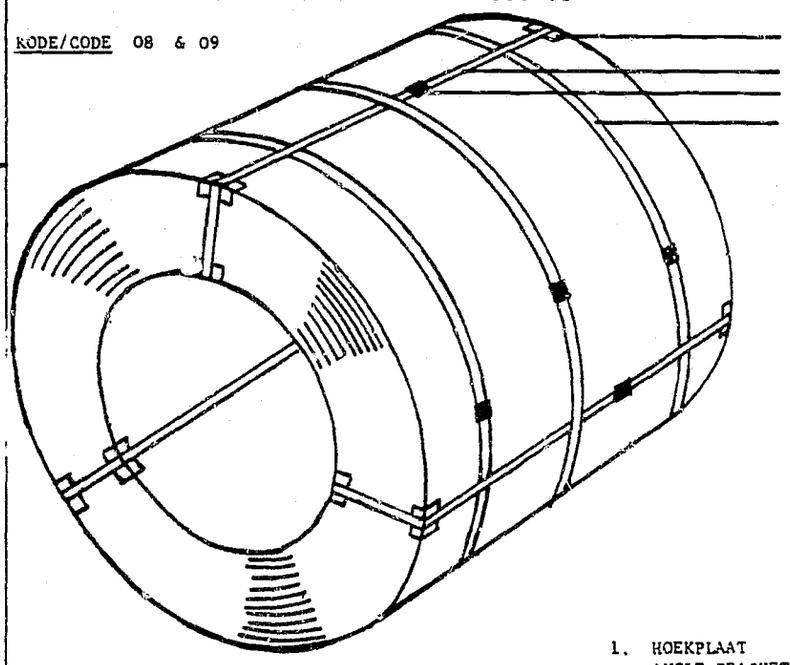
TIPE VERPAKKING/
PACKING TYPE

KODE/CODE 08 & 09

GEEN BESKERMING
NO PROTECTION



1. HOEKPLAAT
   ANGLE BRACKET
2. OOGBANDE
   EYES TIES
3. SEëLS
   SEALS
4. OMTREKBANDE
   CIRCUMFERENTIAL STRAPS

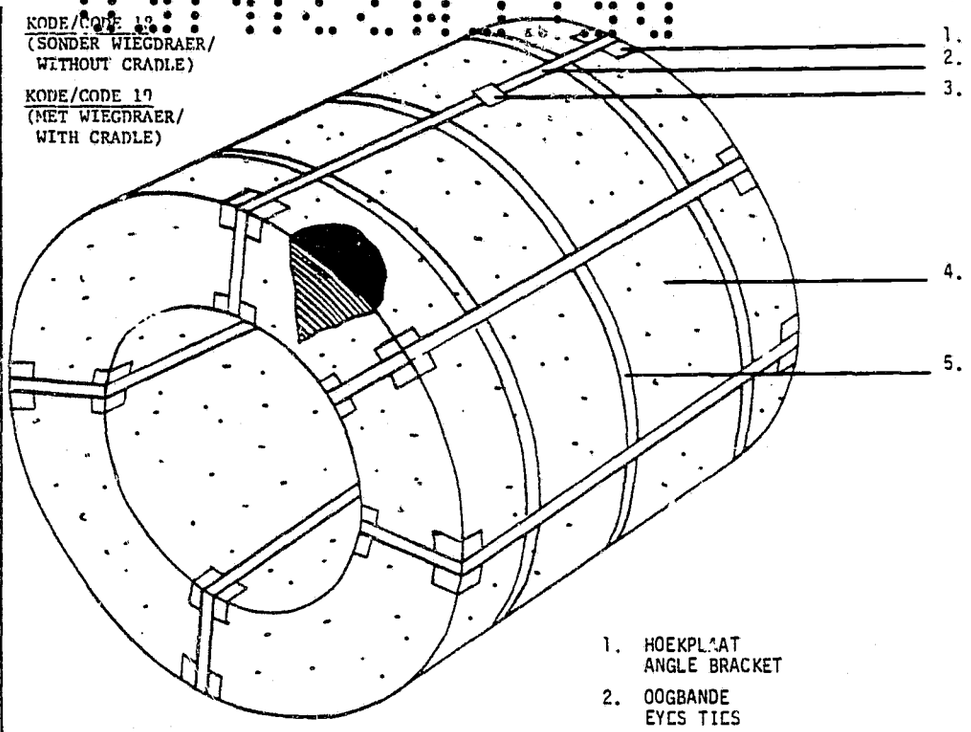
DECLASSIFIED

YSKOR BEPERK ISCOR LIMITED

TIPE VERPAKKING / PACKING TYPE

KODE/CODE 18
(SONDER WIEGDRAER/
WITHOUT CRADLE)

KODE/CODE 19
(MET WIEGDRAER/
WITH CRADLE)



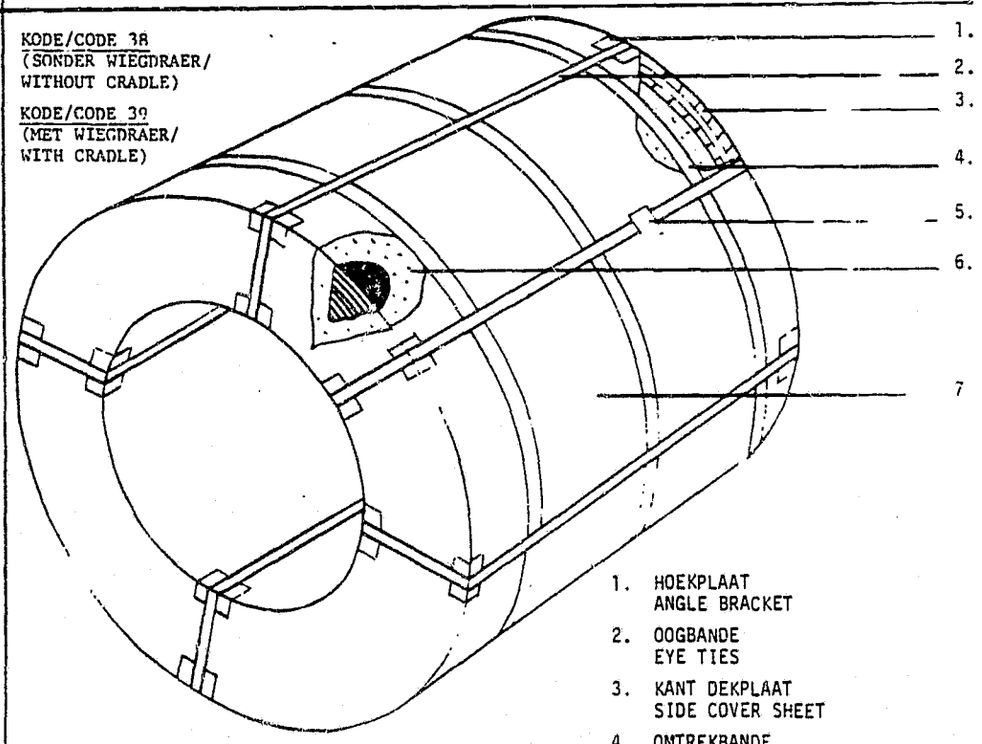
1. HOEKPLAAT
   ANGLE BRACKET
2. OOGBANDE
   EYES TIES
3. SëELS
   SEALS
4. WATERDIGTE PAPIER
   WATERPROOF PAPER
5. OMTREKBANDE
   CIRCUMFERENTIAL STRAPS

WATERDIGTE PAPIER

WATERPROOF PAPER

KODE/CODE 38
(SONDER WIEGDRAER/
WITHOUT CRADLE)

KODE/CODE 39
(MET WIEGDRAER/
WITH CRADLE)



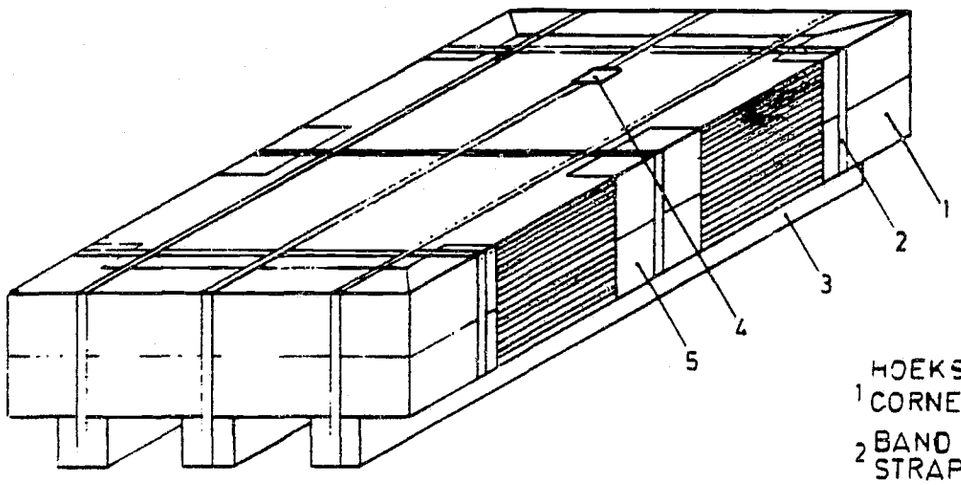
1. HOEKPLAAT
   ANGLE BRACKET
2. OOGBANDE
   EYE TIES
3. KANT DEKPLAAT
   SIDE COVER SHEET
4. OMTREKBANDE
   CIRCUMFERENTIAL STRAPS
5. SëELS
   SEALS
6. WATERDIGTE PAPIER
   WATERPROOF PAPER
7. DEKPLAAT
   COVER SHEET

WATERDIGTE PAPIER EN SKROTPLAATBEDEKKING

WATERPROOF PAPER AND SCRAP SHEET PROTECTION

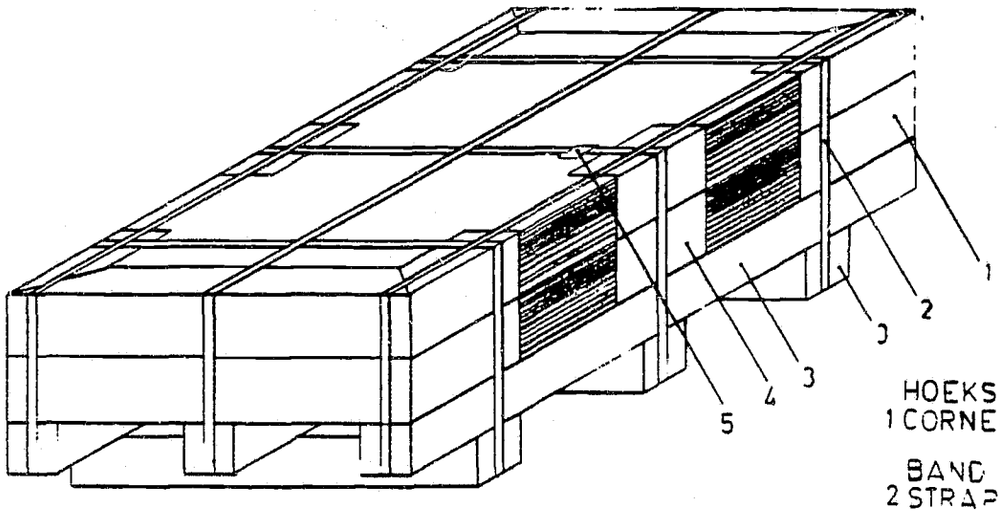
YSKOR BEPERK . . . . ISCOR LIMITED

KODE/CODE 05



1 HOEKSTUT
CORNER BRACKET
2 BAND
STRAP
3 GLYPLANKE
SKIDS
4 SEELS
SEALS
5 HOEKPLAAT
ANGLE BRACKETS

KODE/CODE 06



1 HOEKSTUT
CORNER BRACKET
2 BAND
STRAP
3 GLYPLANKE
SKIDS
4 HOEKPLAAT
ANGLE BRACKET
5 SEELS
SEALS

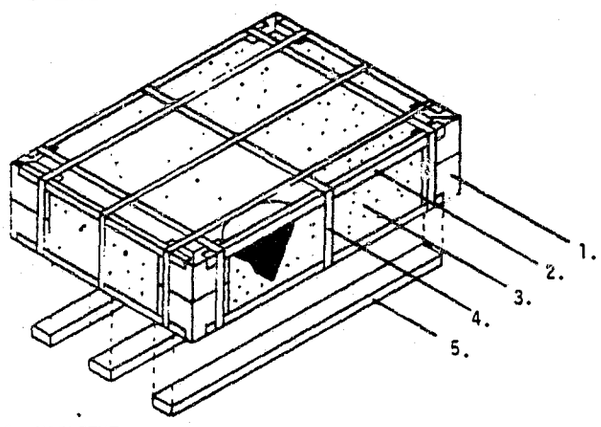
YSKOR BEPERK. ISCOR LIMITED

GLYPLANKE/SKIDS

LENGTE/LENGTHWISE

LENGTE EN DWARS/LENGTH - CROSSWISE

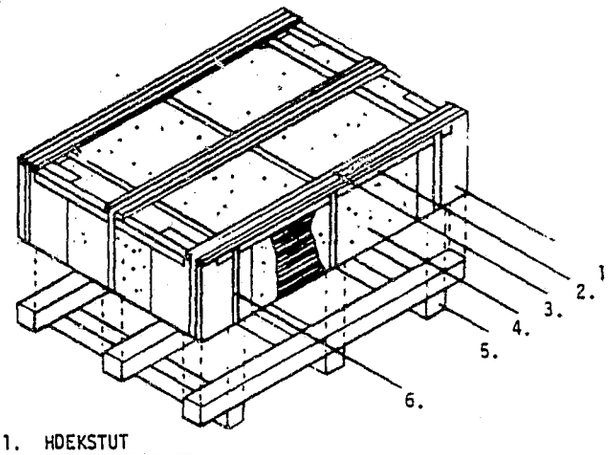
KODE/CODE 15



1. HOEKSTUT
   CORNER BRACKET
2. HOEKPLAAT
   ANGLE BRACKET
3. WATERDIGTE PAPIER
   WATERPROOF PAPER
4. BAND
   STRAP
5. GLYPLANKE
   SKIDS

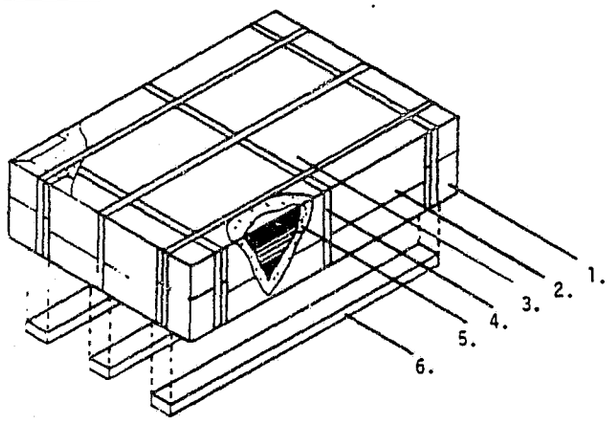
BEPERKINGS/LIMITATIONS	
DIKTE THICKNESS (mm)	WYDTE WIDTH (mm)
≤ 0,9	600 ≤ 1 000
> 0,9	600 ≤ 1 225

KODE/CODE 16



1. HOEKSTUT
   CORNER BRACKET
2. HOEKPLAAT
   ANGLE BRACKET
3. LENGTE PLANKIE
   LENGTHWISE PLANK
4. WATERDIGTE PAPIER
   WATERPROOF PAPER
5. GLYPLANKE
   SKIDS
6. BAND
   STRAP

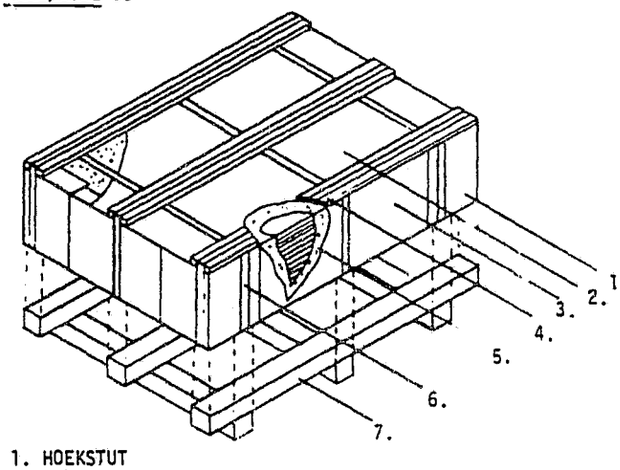
KODE/CODE 35



1. HOEKSTUT
   CORNER BRACKET
2. HOEKPLAAT
   ANGLE BRACKET
3. DEKPLAAT
   COVER SHEET
4. BAND
   STRAP
5. WATERDIGTE PAPIER
   WATERPROOF PAPER
6. GLYPLANKE
   SKIDS

BEPERKINGS/LIMITATION.	
DIKTE THICKNESS (mm)	WYDTE WIDTH (mm)
≤ 0,9	600 ≤ 1 000
> 0,9	600 ≤ 1 225

KODE/CODE 36



1. HOEKSTUT
   CORNER BRACKET
2. DEKPLAAT
   COVER SHEET
3. HOEKPLAAT
   ANGLE BRACKET
4. LENGTE PLANKIE
   LENGTHWISE PLANK
5. WATERDIGTE PAPIER
   WATERPROOF PAPER
6. BAND
   STRAP
7. GLYPLANKE
   SKIDS

B. STANDAARDVERVAARDIGINGSPRAKTYK/ STANDARD MANUFACTURING PRACTICE

1. OMVANG/SCOPE

Versinkte fynplaat bestaan uit daardie groep fynplaar wat verkry word deur koolstofstaal-fynplaat te versink deur 'n deurlopende warm-dompelversinkingsproses.

Galvanised sheet comprises that group of flat sheet obtained by coating carbon steel sheet through a continuous hot dip galvanising process.

Versinkte smalband bestaan uit die groep produkte wat gestrooksny is uit versinkte rolle.

Galvanised slit strip comprises that group of products which has been slit from galvanised coils.

Die beskikbare groottes is beperk tot die wat in die lengte-, wydte- en dikte-tabelle aangetoon word.

The available sizes are limited to those shown in the length, width and thickness tables.

2. KWALITEIT/QUALITY

2.1 Handelskwaliteit

Wanneer Handelskwaliteitmateriaal gespesifiseer word is die volgende analise en toetse van toepassing:-

Chemiese Analise
(Gietpotanalises)

Handelskwaliteit materiaal word normaalweg voorsien in 'n lae-koolstofstaal (C 0,15% maks.).

2.1 Commercial Quality

When Commercial quality sheet is specified the following, analysis and tests are applicable:-

Chemical Analysis
(Ladle Analyses)

Commercial quality material is normally supplied in a low carbon steel (C 0,15% max.).

2.2 Buigtoetse
(Basismetaal)

Vir Handelskwaliteit, behoort die toetsmonster by kamertemperatuur in enige rigting plat op sigself gebuig te kan word. Daar behoort geen geredelik sigbare krake op enige gebuigde oppervlak sigbaar te wees nie.

2.2 Bend Tests
(Base Metal)

For Commercial quality, a test specimen should stand being bent flat on itself in any direction at room temperature. There should be no readily visible cracks along any bend.

2. KWALITEIT (VERVOLG)/QUALITY (CONTINUED)

2.3 Deklaagbuigtoetse

Toetsmonsters moet van 50 tot 100 mm wyd wees en moet minstens 50 mm van die kant van die toetsplaat gesny word. Die buigtoetsmonsters moet in staat wees om in enige rigting deur 180° gebuig te word om die getal stukke van dieselfde dikte, soos in onderstaande tabel aangetoon, sonder dat afvlokking van die deklaag aan die buitekant plaasvind. Afvlokking van die deklaag binne 6 mm van die kant van die buigmonster moet nie 'n oorsaak wees vir afkeuring nie. Buigtoetse word nie vereis in die geval van fynplaat wat vir gegolfde dakbedekking of bekleding gebruik gaan word nie.

2.3 Coating Bend Tests

Test specimens shall be 50 to 100 mm wide and shall be cut not less than 50 mm from the edges of the test sheet.
The bend test specimens shall be capable of being bent through 180° in any direction around the number of pieces of equal thickness as shown in the table below, without flaking of the coating on the outside of the bend only. Flaking of coating within 6 mm of the edge of the bend specimen shall not be a cause for rejection. Bend tests are not required of sheets intended for corrugated roofing or sheathing.

DEKLAAGAANDUIDING/ COATING DESIGNATION	GETAL STUKKE VAN DIESELFDE DIKTE/ NUMBER OF PIECES OF SAME THICKNESS		
	DIKTEBESTEKKE/THICKNESS RANGES		
	0,35 mm - 1 mm	> 1 mm - 2 mm	> 2 mm - 3 mm
G185	0	0	0
G275	0	0	1
G425	(a) 1	1	2
G650	(a) 2	2	-

(a) Nie beskikbaar in diktes dunner as 0,5 mm nie/
Not available in thicknesses thinner than 0,5 mm.

Deklaagmassa

Die massa van die deklaag is die totale hoeveelheid sink aan albei kante van 'n smalband/fynplaat uitgedruk in gram per vierkante meter. Die toetsmetode sal ooreenkomstig die jongste uitreiking van ASTM A525 wees.
Die massa van die deklaag vir die deklaagaanduidings sal voldoen aan die vereistes vir "triple" - "single spot" - minimum toetsperke volgens die volgende tabel.

Coating Mass

The mass of the coating is the total amount of zinc on both sides of a strip/sheet expressed in grams per square metre. The method of testing will be in accordance with the latest issue of ASTM A525.

The mass of the coating for the coating designations shall conform to the requirements for triple and single spot minimum check limits according to the following table.

DEKLAAG-AANDUIDING/ COATING DESIGNATION	MASSA VAN DEKLAAG IN g/m^2 / MASS OF COATING IN g/m^2	
	MIN. DEKLAAG VOLGENS 'TRIPLE SPOT'-TOETS/ MIN. COATING TO THE TRIPLE SPOT TEST	MIN. DEKLAAG VOLGENS 'SINGLE SPOT'-TOETS MIN. COATING TO THE SINGLE SPOT TEST
G185	185	152
G275	275	250
G425	425	350
G650	650	550

2.4 Passivering

Versinkte fynplaat in rolle en gesnyde lengtes word normaalweg 'n passivering behandeling gegee as beskerming teen klamopbergvlekkingsgevaar. Die werke se standaard vir passivering is vir 'n egalige bedekking 20-40 M.G. CR/M^2 aan albei kante (mikpunt)

Wanneer versinkte materiaal gespesifiseer word, "nie gepassiveerd" word kan geen verantwoordelikheid deur die Korporasie vir klamopbergvlekking aanvaar word nie. (Kode 2654)

2.4 Passivation

Galvanised coils and sheets are normally given a passivating treatment as protection against wet storage stain h zard works standards for passivation is for an even coating 20-40 M.G. CR/M^2 both sides (aim).

When galvanised material is specified "Unpassivated" no liability can be accepted by the Corporation for wet storage stain (Code 2654)

VERSINKTE SMALBAND/FYNPLAAT EN ROLLE / GALVANISED SLIT STRIP/SHEETS AND COILS

3. GROOTTEREEKS/RANGE OF SIZES

FYNPLAAT / SHEETS					SMALBAND/SLIT STRIP
STANDAARD-DIKTES NA VERSINKING/ STANDARD THICKNESS AFTER COATING	WYDTE/WIDTH	LENGTE/LENGTH			
	ROLLE EN GESNYDE LENGTES/ COILS AND CUT LENGTHS	HANDELS- EN SLUITVOEGKWALI-TEIT/COMMERCIAL AND LOCKFORMING QUALITY	TREK-KWALITEITE DRAWING QUALITIES	ALLE KWALI-TEITE/ ALL QUALITIES	WYDTE/ WIDTH
		< 800 mm	WYDTES/WIDTHS < 800 mm	⩾800 mm	
mm	mm	m	m	m	mm
3,00	740				75 tot/to < 600
2,80					30 tot/to < 600
2,50	tot/to	1,0	1,0		
2,20	1 225				
2,00	600 tot 1 225	tot/to	tot/to		
1,60	600				
1,40	tot/to	5,0	4,0	1,0	25
1,20	1 600				
1,00					
	600	1,0	1,0	tot/to	tot/to
0,80	tot/to	tot/to	tot/to		
	1 500	4,3	3,35	5,0	< 600
0,60	600 tot/to	1,0	1,0 tot/to		
	1 400	tot/to	3,0		
0,50	600 tot/to	3,65			
	1 225				25
0,40	600		tot/to	1,0	< 400
	tot/to	1,0 tot/to 2,5	2,5	tot/to	
	1000			2,5	
*0,35		-	-	-	-

*Slegs rolle / *Coils only

KODE / CODE	DIAMETER BINNE / DIAMETER INSIDE (mm)		
	ROL WYDTES / COIL WIDTHS (mm) ⩾ 600 mm	SMALBAND DIKTES / SLIT STRIP THICKNESSES >2,5 mm	⩽2,5 mm
2591	510	610	510

4. TOLERANSIES / TOLERANCES

Versinkte Smalband/Fynplaat word geproduseer in millimeterdiktes. Die dikte verwys na diktes van die materiaal na versinking.
Normale digtheid van staal is:
1 vk meter fynplaat 1 mm dik = 7,85 kg.
Versinkte fynplaat/Smalband word op 'n grondslag van massa verkoop. Om massa in dikte om te sit, met inagneming van kroon en oortoleransie by wydte en lengte is die volgende formule van toepassing:-
1 vk meter fynplaat, 1 mm dik = 8,039 kg.

4.1 Massatoleransie - Gesnyde lengtes alleenlik
Die toelaatbare afwyking van die berekende massa geneem van alle plate van een versending van een grootte en een dikte na een bestemming (maar nie individuele fynplate nie) sal die volgende persentasie bo of onder die berekende massa wees:-

Galvanised Slit Strip/Sheet is produced to millimetre thicknesses. The thickness refers to the thickness of the material after coating.
Normal density of steel is:
1 sq metre of sheet 1 mm thick = 7,85 kg.
Galvanised Sheet/Strip is sold on a mass basis. To convert mass to thickness taking into account crown and over tolerance on width and length the following formula applies:-

1 sq metre of sheet, 1 mm thick = 8,039 kg.

4.1 Mass tolerance - Cut lengths only
The permissible variation from calculated mass taken over all sheets of one despatch of one size and one thickness to one destination (but not to individual sheets) shall be the following percentage above or below the calculated mass:-

BEREKENDE MASSA - TON/ CALCULATED MASS - TONS	TOELAATBARE AFWYKING VAN BEREKENDE MASSA/ PERMISSIBLE VARIATION FROM CALCULATED MASS			
	UNDER/ONDER		OOR/OVER	
	G185/G275	G425/G650	G185/G275	G425/G650
< 5	10,0	12	10	20
5 - < 20	7,0	8,5	7,0	14
⩾ 20	3,5	4,5	3,5	7

BYVOORBEELD: Maksimum toelaatbare massa = Aantal plate ontvang x wydte (m) x Lengte (m) x dikte (mm) x 8,039 x % oor/onder soos per bostaande tabel.

FOR EXAMPLE: Maximum permissible mass = Number of sheets received x width (m) x length (m) x thickness (mm) x 8,039 x % over/under as per above table.

4. TOLERANSIES (VERVOLG)/
TOLERANCES (CONTINUED)

4.2 Dikte Toleransies
4.2.1 ROLLE, SMALBAND EN GESNYDE LENGTES

4.2 Thickness Tolerances
4.2.1 COILS, SLIT STRIP AND CUT LENGTHS

DEKLAAG-AANDUIDING/ COATING DESIGNATION	DIKTE / THICKNESS (mm)									
	> 2,0 - 3,0		> 1,4 - 2,0		1,0 - 1,40		0,5 - < 1,0		0,35 - < 0,5	
	DIKTETOLERANSIE (mm)/ THICKNESS TOLERANCE (mm)									
	ONDER(-)OOR(+)/ UNDER(-)OVER(+)		ONDER(-)OOR(+)/ UNDER(-) OVER(+)		ONDER(-)OOR(+)/ UNDER(-)OVER(+)		ONDER(-)OOR(+)/ UNDER(-)OVER(+)		ONDER(-)OOR(+)/ UNDER(-)OVER(+)	
G185	0,19	0,19	0,14	0,14	0,11	0,11	0,09	0,09	0,06	0,06
G275	0,19	0,19	0,14	0,14	0,11	0,11	0,09	0,09	0,06	0,06
G425	0,22	0,34	0,17	0,29	0,14	0,26	0,12	0,24		
G650	0,22	0,34	0,17	0,29	0,14	0,26	0,12	0,24		

OPMERKING
Vir enige gespesifiseerde deklaag kan die nominale basismetaaldikte verkry word deur 0,04 mm van die bestelde dikte (na versinking) af te trek.

NOTE
For any specified coating the nominal base metal thickness may be obtained by deducting 0,04 mm from the ordered coated thickness.

4.3 Wydtetoleransie (Smalband 150 - < 600 mm)

4.3 Width Tolerance (Slit Strip 150 - < 600 mm)

DIKTE NA VERSINKING/ THICKNESS AFTER GALVANISING (mm)	WYDTES / WIDTHS (mm)				
	25 - < 150	150 - < 225	150 - < 300	300 - < 450	450 - < 600
	AFWYKINGS OOR(+) EN ONDER(-)/ VARIATIONS OVER(+) AND UNDER(-)				
3,0 - 2,8	0,20	0,40	0,50	0,80	1,00
< 2,8 - 0,4	0,20	0,30	0,30	0,70	1,00

4.4 Wydte- en Lengtetoleransies (Fynplaat/ Rolle ⩾ 600 mm) (Nie Haaksgesny nie)

4.4 Width and Length Tolerances (Sheets/ Coils ⩾ 600 mm) (Not squared)

WYDTE / WIDTH		LENGTE / LENGTH	
GESPESIFISEERDE WYDTE/ SPECIFIED WIDTH (mm)	TOLERANSIE BO GESPESIFISEERDE WYDTE/ TOLERANCE OVER SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE/ SPECIFIED LENGTH (mm)	TOLERANSIE BO GESPESIFISEERDE LENGTE/ TOLERANCE OVER SPECIFIED LENGTH (mm)
600 - 750	3	⩽ 1 525	6
> 750 - 1 225	5	> 1 525 - 2 450	13
> 1 225 - 1 525	6	> 2 450 - 3 050	19
> 1 525 - 1 600	8	> 3 050 - 4 000	25
		> 4 000 - 4 900	31
		> 4 900 - 5 000	38

OPMERKING: WYDTE- EN LENGTETOLERANSIE NIKS ONDER NIE.

NOTE: WIDTH AND LENGTH TOLERANCE NOTHING UNDER.

DECTRACKED

VERSINKTE SMALBAND/FYNPLAAT EN ROLLE — GALVANISED SLIT STRIP/SHEETS AND COILS

4. TOLERANSIES (VERVOLG) / TOLERANCES (CONTINUED)

4.5 Krommingtoleransies

Kromming is die grootste afwyking tussen 'n sykant en 'n reguit lyn, gemeet deur middel van 'n rei aan die uitholkant. Krommingtoleransies vir versinkte fynplaat is soos volg:-

Smalband en Rolle
25 mm vir enige 6 000 mm lengte.
Gesnyde Lengtes (Nie haaksgesny nie)
0,4% X lengte.

4.5 Camber Tolerances

Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straight edge. Camber tolerances for galvanised sheet are as follows:-

Slit Strip and Coils
25 mm in any 6 000 mm length.
Cut Lengths (Not resquared)
0,4% X Length.

4.6 Nie-haaks-toleransies (Nie haaksgesny nie)
Gesnyde lengtes.

Nie-haaks is die grootste afwyking van 'n kant van 'n reguit lyn reghoekig met 'n sy en rakende die een hoek. Die toleransie by versinkte fynplaat van alle diktes en alle groottes is 1,0% van die wydte.

4.6 Out-of-square Tolerances (Not resquared)
Cut lengths.

Out-of-Square is the greatest deviation of an edge from a straight line at right angles to a side and touching one corner. The tolerance for galvanised sheets of all thicknesses and all sizes is 1,0% of the width.

4.7 Toleransies vir haaksgesnyde versinkte fynplaat (Gesnyde Lengtes)

Die individuele toleransies vir oor-wydte, oor-lengte, kromming of nie-haaks is soos volg:-

4.7 Resquared Galvanised Sheet Tolerances (Cut Lengths)

The individual tolerances for over-width, over-length, camber or out-of-square are as follows:-

WYDTE / WIDTH (MAKS/MAX. 1 600 mm)	LENGTE / LENGTH	TOLERANSIE/TOLERANCE
mm	mm	mm
⩽1 225	⩽3 000	-0 +1,5
	>3 000	-0 +3,0
>1 225	⩽4 550	-0 +3,0

4.8 Platheidstoleransies (Gesnyde Lengtes)
(a) Platrig nie gespesifiseer

4.8 Flatness Tolerances (Cut Lengths)
(a) Levelling not specified

DIE MAKSIMUM AFWYKING VAN 'N HORISONTALE PLAT OPPERVLAK/THE MAXIMUM DEVIATION FROM A HORIZONTAL FLAT SURFACE		
GESPESIFISEERDE DIKTE NA VERSINKING (mm) / SPECIFIED THICKNESS AFTER COATING (mm)	GESPESIFISEERDE WYDTE (mm)/ SPECIFIED WIDTH (mm) /	PLATHEIDSTOLERANSIE (mm)/ FLATNESS TOLERANCE (mm)
⩾1,2	⩽925	6
	>925 - 1 525	10
	>1 525 - 1 600	16
<1,2	⩽925	10
	>925 - 1 525	16
	>1 525 - 1 600	22

Opmerking: Wanneer versinkte fynplaat in lengtes gesny word, word dit plat gedruk deur kragtige rolrigters wat deel uitmaak van ons snyproses. Tensy die klant oor soortgelyke rolriggeriewe beskik, moet hy nie verwag om dieselfde platheidstoleransies te behaal indien hy self fynplaat in lengtes uit rolle sny nie.

Note: When galvanised cut lengths are processed, the sheets are flattened by powerful levellers which form part of the shearing line. Unless the customer has similar levelling facilities, he should not expect sheets cut by himself from coils to meet our flatness tolerances.

(b) Platrig gespesifiseer
(Maks. dikte 2,0 mm)

(b) Levelling specified
(Max. thickness 2,0 mm)

DIE MAKSIMUM AFWYKING VAN 'N PLAT OPPERVLAK/THE MAXIMUM DEVIATION FROM A FLAT SURFACE			
GESPESIFISEERDE DIKTE (mm) SPECIFIED THICKNESS (mm)	GESPESIFISEERDE WYDTE (mm) SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE (mm) SPECIFIED LENGTH (mm)	PLATHEIDSTOLERANSIE (mm) FLATNESS TOLERANCE (mm)
⩾0,80	⩽1 225	⩽3 000	3
	>1 225 - 1 600	⩽5 000	6
0,5 - <0,8	⩽925	⩽3 000	6
	⩽1 600	⩽5 000	10

5. ALGEMEEN/ GENERAL

5.1 Oormaat of Ondermaat

Vir elke item van 'n bestelling behou ons ons die reg voor om materiaal te voorsien binne die toleransies uiteengesit in die volgende tabel:-

MASSA VAN BESTELDE ITEMS OF DIE BEREKENDE MASSA VAN DIE AANTAL PLATE BESTEL/ MASS OF ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF SHEETS ORDERED	OORMAAT (+)/ONDERMAAT(-)/ OVERAGE (+)/UNDERAGE (-)
TON/TONS	TON(S)
2 -< 5	+ 1 - 1
5 -< 10	+ 2 - 3
10 -< 20	+ 3 - 4
20 -< 40	+ 4 - 5
40 -<100	+ 4 - 6
⩾100	+ 6 -10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Vir beperkings op bogenoemde toleransies- verwys bls. P6 par. 7

5.2 Saambind in Bondels

(a) Gesnyde Lengtes

Versinkte Fynplaat word behoorlik deur middel van bande om bondels van die volgende groottes gebind:-

(i) Vir wydtes ⩽1225 mm
Ongeveer 1,25 ton
Ongeveer 2,5 ton
Ongeveer 4 ton
Ongeveer 5 ton

(ii) Vir wydtes >1225 mm
Ongeveer 4 ton
Ongeveer 5 ton

Die klant se naam en versendingsadres word op die boonste plaat van elke saamgestelde bondel aangebring. Wanneer bondelgroottes van 1,25 en 2,5 ton bestel word vir versending na 'n klant, behou ons ons die reg voor om 'n aantal kleiner bondels saam te bind in een gesamentlike bondel van ongeveer 5,00 ton. In sulke gevalle word die klant se naam en versendingsadres slegs op die boonste bondel aangebring, terwyl die kleiner bondels so gemerk word dat die maklik met die boonste bondels vereenselwig kan word. Klante moet op die bestelling aandui indien hulle enige probleme ondervind met hierdie saamgestelde bondels.

(b) Rolle

Versinkte Fynplaat in rolle word stewig gebind met bande deur die oog en na ons goeddunke met een bykomende band om die omtrek.
Rolle word in groepe saam geweeg, en die gemiddelde massa bepaal deur die getal, is nie noodwendig die werklike massa van elke afsonderlike rol nie.

5.1 Overage or Underage

For each item on an order we reserve the right to supply within the tolerances specified in the following table:-

Where a minimum or maximum quantity is specified the average or underage will be the total of the applicable plus and minus tolerance.
For restrictions on the above tolerances - refer page P6 paragraph 7

5.2 Bundling

(a) Cut Lengths

Galvanised Sheets are packed in bundles suitably tied by means of bands, in the following sizes:-

(i) For widths ⩽ 1225 mm
Approximately 1,25 tons
Approximately 2,5 tons
Approximately 4 tons
Approximately 5 tons

(ii) For widths >1225 mm
Approximately 4 tons
Approximately 5 tons

The customer's name and consigning address are indicated on the top sheet of each composite bundle. When bundle sizes of approximately 1,25 and 2,50 tons are ordered for dispatch to one customer, we reserve the right of making up composite bundles up to approximately 5,00 tons by strapping together a number of the smaller bundles. In such cases the customer's name and consigning address are indicated on the top bundle only and each of the smaller bundles is marked so as to associate it with the top bundle. Customers should indicate on the order if any difficulties are experienced with composite bundles.

(b) Coils

Galvanised Sheets in coils are securely strapped with eye bands and, at our option, with an additional band round the circumference of the coil.
Coils are weighed in groups, and the mass of the group averaged over the number of coils. This average mass is not intended to be the actual mass of any individual coil.

UNCONTROLLED

5. ALGEMEEN (VERVOLG)/ GENERAL (CONTINUED)

5.2 Saambind in bondels en Merking (verv.)

(c) Smalband in Rolle

(i) Enkelrolle of bondels rolle kan vir vervoerdoeleindes met staalband saamgebind word in saamgestelde bondels rolle. Die staalbande wat sulke saamgestelde bondels bind, kan deur die geadresseerde vir aflaaidoeleindes gesny word.

(ii) Bondels rolle word geweeg, en uit die getal rolle per bondel word 'n gemiddelde massa per rol bepaal. Die gemiddelde massa is nie noodwendig die werklike massa van enige rol nie.

5.2.2 MERKING

(a) Gesnyde Lengtes (4,5mm dik)
Die boonste plaat van elke bondel word gemerk met die graad- of kwaliteitsimbool, dikte, lengte, wydte, en benaderde getal plate in die bondel.

(b) Rolle
Die deklaag, kwaliteit, wydte en dikte word op elke rol, aangebring.

(c) Smalband
Elke bondel rolle word gemerk met die kwaliteit, wydte en dikte.
Opmerking: Wanneer 'n analisesertifikaat of 'n analise- en toetssertifikaat vereis word, sal die "gietnommer" op die bondel/rol aangetoon word.

5.3 Massa van Rolle
Bestellings vir rolle met 'n gespesifiseerde presiese massa word nie aanvaar nie. Rolle kan bestel word tot 'n gespesifiseerde maksimum massa volgens bladsy P7. Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel sal versending van die bestelling soos volg geskied:-

(a) Minstens 80% in volmassarolle.
(b) Hoogstens 20% in ligmassarolle.

'Volmassarolle'
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, word rolle met 'n massa van minstens 65% van daardie maksimum massa gelewer.

'Ligmassarolle'
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, is 'Ligmassarolle' rolle met 'n massa van minder as 'volmassarolle' maar met minstens 25% van die maksimum massa, hetsy gespesifiseer of omgereken.

5.4 Produkinligting
Rolle
Wanneer rolle beatel word, moet daar verwag word dat hulle meer oppervlakdefekte (sweislasse, gate, swaar deklaag ens.) as gesnyde lengtes, sal bevat omdat dit nie moontlik is om gedeeltes wat defekte bevat af te keur of te sorteer soos in die geval van gesnyde lengtes nie.

Ander Kwaliteite as Handelakwaliteit
Warmgewalste Fynplaat/Smalband word volgens A.S.T.M.-, BS- en ander spesifikasies geproduseer.
Tensy anders ooreengekom, word ander kwaliteite as Handelskwaliteit in ooreenstemming met die vereistes van die betrokke spesifikasie voorsien.

Verspringhaspeling (rolls)
Die Werke behou die reg voor om verspringhaspelrolle te voorsien. Enige afwyking van hierdie standaard is onderhewig aan navraag.

5.5 Seile
Alle materiaal versend deur die Werke sal deur seile bedek wees tydens vervoer.

5.2 Bundling and Marking (contd.)

(c) Slit Strip in Coils

(i) Individual or bundles of coils may be strapped together to form composite bundles of coils for transporting purposes. Bands securing such composite coils can be cut by consignees for offloading purposes.

(ii) Coils are weighed in bundles and the mass averaged over the number of coils in the bundle. This average mass is not intended to be the actual mass of any individual coil.

5.2.2 MARKING

(a) Cut Lengths (4,5mm thick)
The top sheet of each bundle will be marked to indicate grade or quality symbol, thickness, length, width and approximate number of sheets.

(b) Coils
Each coil is marked with the coating class, quality width and thickness.

(c) Slit Strip
Each bundle of coils is marked with the quality, width and thickness.
Note: When an analysis certificate or analysis and test certificate is required, the "Cast number" will be indicated on the bundle/coil.

5.3 Mass of Coils
Orders for coils to a specified exact mass are not accepted. Coils may be ordered with a specified maximum mass in accordance with page P7. When coils are ordered to a specified maximum mass, the order is dispatched as follows:-

(a) Not less than 80% in full mass coils.
(b) Not more than 20% in light mass coils.

'Full Mass Coils'
When coils to specified maximum mass are ordered, then coils are supplied with a mass of not less than 65% of that maximum mass.

'Light Mass Coils'
When coils are ordered to a specified maximum mass, then 'Light Mass Coils' are coils with a mass of less than 'Full Mass Coils' but not less than 25% of the maximum mass specified or converted.

5.4 Product Information
Coils
When coils are ordered, it must be expected that they will contain more surface imperfections (welds, holes, heavy costing etc.) than cut lengths as it is not possible to reject and sort portions containing imperfections as is the case with cut lengths.

Qualities other than Commercial Quality
Hot Rolled Sheets/Slit Strip are produced to A.S.T.M.-, BS- and other spesifications.
Unless otherwise agreed upon, qualities other than Commercial quality supplied in accordance with the requirements of the relevant specification.

Stagger-winding (coils)
Works reserves the right to supply stagger-wound coils. Any deviation from this standard is subject to enquiry.

5.5 Tarpaulins
All material dispatched by the Works will be covered by tarpaulins during transit.

5. ALGEMEEN (VERVOLG)/GENERAL (CONTINUED)

5.5 WITROESVOORKOMING/WHITE RUST PREVENTION

Versinkte materiaal is, wanneer dit nie toereikend beskerm is nie, vatbaar vir witroes en verbruikers word aangeraai om die volgende voorsorgmaatreëls te tref:

Galvanised sheet, when not adequately protected, is succeptible to white rust and users are advised to take the following precautions:

5.5.1 BERGING/STORAGE

Berg die versinkte materiaal op onder toestand van lae humiditeit (minder as 60%). Hoë humiditeit laat roes vinniger vorm.
Indien dit nie moontlik is om die humiditeit of temperatuur te beheer nie moet die versinkte plaat opgeberg word waar die lugsirkulasie goed is. Stagnante lug, tesame met temperatuur-veranderings, laat vog vorm en die versinkte plaat roes gevolglik. Versinkte plaat moet onder geen omstandigheid direk op vloere gestapel word nie.

Store the galvanised sheet under low humidity conditions (less than 60%). High humidity accelerates the formation of rust.
If it is impossible to control humidity or temperature, the galvanised sheet must be stored where the air circulation is good. Stagnant air together with temperature changes precipitates moisture and rusting of the galvanised sheet consequently takes place. Galvanised sheet must under no circumstances be stacked direct on floors.

5.5.2 PASSIVEER/PASSIVATION

Bestel versinkte materiaal gepassiveer Die chroom in die passiveermiddel voorkom witroes. Dit is slegs as tydelike beskerming bedoel, en hierdie versinkte materiaal moet beskerm word om te verhoed dat dit in aanraking kom met vog.

Order galvanised material passivated. The chrome in the passivating agent prevent white rust. It is only intended as a temporary protection and this galvanised material must be protected to prevent it from coming into contact with moisture.

5.5.3 VERPAKKING/PACKING

Bestel versinkte materiaal in 'n beskermende verpakking (verwys bladsy P7 en P10). Die aantal dae na versending wat roes voorkom word deur 'n spesifieke verpakkingsmetode, onder korrekte bergings-toestande en met onbeskadigde verpakking word in die volgende Tabel aangetoon:

Order galvanised material in a protective packing (refer Page P7 and P10). The number of days after despatch that rust can be prevented by a specified packing method under correct storage conditions and with undamaged packing are indicated in following Table:

TABEL / TABLE 1

PRODUK / PRODUCT	VERPAKKING / PACKING		AANTAL DAE / NUMBER OF DAYS	
	KODE / CODE	BESKRYWING/DESCRIPTION	Ge-oliede materiaal/ Oiled Material	Onge-oliede materiaal/ Unoiled Materiaal
Gesnyde Lengtes / Cut Lengths	05 en/and 06	Onbeskermde verpakking op lengte of op lengte en dwarsglyplanke / Unprotected packing on lengthwise or on length and crosswise skids	0	0
	15 en/and 16	Waterdigte papierbedekking op lengte of op lengte- en dwarsglyplanke/Waterproof paper covering on lengthwise or on length and crosswise skids	60	30
	35 en/and 36	Waterdigte papier kant beskerming en dekplate op lengte of lengte- en dwarsgly-planke/Waterproof paper, edge protection and sheet covering on lengthwise or length and crosswise skids.	120	90
Rolle / Coils	08 en/and 09	Onbeskermde verpakking op of sonder wiegdraer/Unprotected packing on or without cradles.	0	0
	18 en/and 19	Waterdigte papierbedekking op of sonder wiegdraers/Waterproof paper protection on or without cradles	60	30
	38 en/and 39	Waterdigte papier en skrotbedekking op of sonder wieg-draers/Waterproof paper and scrap covering on or without cradles.	120	90

5. ALGEMEEN (VERVOLG)/GENERAL (CONTINUED)

5.5.3 VERPAKKING/PACKING

OPMERKING:

(i) Geen eise vir roes sal oorweeg word indien verpakking in transito en tydens daaropvolgende hantering beskadig is nie.

(ii) Geen eise vir roes sal oorweeg word indien materiaal in die buitelug of in 'n ondoeltreffende pakhuis geberg word nie.

(iii) Eise vir roes sal slegs oorweeg word indien dit ingedien word binne die periodes wat in Tabel 1 aangedui is. Waar die aantal dae wat materiaal teen roes beskerm kan word, gelyk is aan nul (kodes 05, 06, 08, 09 en 15, 16, 18 en 19 ongepassiveer) word materiaal gevolglik in totaal op klant se risiko voorsien en geen roeseis sal hoegenaamd deur die Korporasie oorweeg word nie.

(iv) Enige skikking van 'n eis ten opsigte van roes sal afhang van die uitslag van 'n ondersoek en bevindings deur die Korporasie.

NOTE:

(i) No claims for rust will be considered if the packing has been damaged in transit and during subsequent handling.

(ii) No claims for rust will be considered when material is stored in the open or in an unefficient warehouse.

(iii) Claims for rust will only be considered when submitted within the periodes prescribed in Table 1. Where the number of days material can be protected against rust are equal to nil (codes 05, 06, 08, 09 (and 15, 16, 18 and 19 unpassivated) will material consequently in total be supplied solely at customer's risk and no claims for rust will at all be considered by the Corporation.

(iv) Any settlement of a claim in connection with rust will depend on the result of the Corporation's investigation and findings.

5.5.4 ALGEMEEN/GENERAL

(i) Wanneer pakke oopgemaak word moet die materiaal met die minimum vertraging gebruik word.

(ii) In gevalle waar die versinkte materiaal regstreeks met water in aanraking kom, moet dit met 'n goedgekeurde ontwaterolie behandel word en onmiddellik gebruik word.

(i) When opening packs the material must be used with a minimum delay.

(ii) In the event of the galvanised material coming into direct contact with water, it should be treated with an approved dewatering oil and used as soon as possible.

5.6 FISIESE SKADE/PHYSICAL DAMAGE

Alle materiaal moet ondersoek word vir nattigheid of skade wanneer dit van die voertuig afgelaai word. Aflewerings-briewe moet geëndoseer word en Yskor moet onmiddellik verwittig word. Geen laat eise sal aanvaar word nie.

All material to be inspected for wetness or damage when off-loaded from transporters. Delivery notes must be endorsed and Iscor advised immediately. No late claims will be accepted.

5.7 RIFFELING EN VERVORMVEROUDERING/"FLUTING AND STRAIN AGEING

Wanneer versinkte fynplaat oor 'n tydperk opgeberg word, is dit onderhewig aan die verskynsel wat algemeen bekend staan as veroudering. Die tempo waarteen sodanige veroudering plaasvind hang grootliks af van die omgewingstemperatuur waarby die materiaal opgeberg, of onderhewig is, voor fabrisering. Temperature hoër as 25^0C versnel gewoonlik die verouderingsproses. Gedurende die prosessering van versinkte fynplaat verskyn hierdie veroudering in die vorm van oppervlaksteurings, soos riffeling- en rekvervorming. YSKOR het geen beheer oor hierdie verskynsel nie en ten einde hierdie voorkoms van riffeling en rekvervorming tot 'n minimum te beperk, is dit noodsaaklik dat versinkte materiaal so gou moontlik na aflewering deur YSKOR gebruik word, met geskikte rolrigting voor fabrisering.

Galvanised sheet, when stored over a period of time is subject to the phenomenon commonly known as ageing. The rate at which such ageing takes place will largely depend on the ambient temperature at which the material is stored or subjected to, prior to fabrication. Temperatures above 25^0C normally accelerate the ageing process. During processing of galvanised sheet, this ageing shows up in surface disturbances such as fluting or stretcher strains. ISCOR has no control over this phenomenon, and in order to minimise the occurrence of fluting or stretcher strains it is imperative that galvanised material be used as soon as possible after delivery by ISCOR with effective roller levelling immediately before fabrication."

YSKOR BEPERK ISCOR LIMITED

ALGEMEEN/GENERAL

EISE : TOELATINGSBELEID

1. INLEIDING

By die produksie van warmgewalste, koudgewalste en versinkte fynplaat is daar afwykings wat inherent is in die staal en die verwerking daarvan, wat verhoed dat dit geheel en al aan die vereistes voldoen ten opsigte van die produkeienskappe wat deur die klant verlang word.

Die inligting hieronder uiteengesit, is veronderstel om aan die Korporasie se Klante 'n duidelike beeld te gee van sy verantwoordelikhede met betrekking tot die mees algemene afwykings in fynplaat wat in rolle en gesnyde lengtes vervaardig word.

2. OPPERVLAKINSPEKSIE

Dit is gewone praktyk om die boonste oppervlak van gesnyde lengtes te inspekteer, wanneer dit van rolle in lengtes gesny word. Rolle word nie geïnspekteer nie, maar die kant met die gespesifiseerde oppervlakafwerking sal aangedui wees. Omdat die bokant van 'n gesnyde lengte of aangeduide kant van 'n rol die kant is met die gespesifiseerde oppervlakafwerking mag die anderkant meer dikwels oppervlakimperfeksies bevat. Voorsorg maatreëls moet getref word om die aangeduide kant te gebruik vir die kritiese oppervlak van 'n gefabriseerde onderdeel te gebruik.

Rolle bevat meer oppervlakimperfeksies as gesnyde lengtes aangesien dit nie moontlik is om die gedeeltes wat die imperfeksies bevat af te keur en te sorteer, soos in die geval van gesnyde lengtes nie.

3. WALSDEFEKTE WAARVOOR GEWYSIGDE EISTOELATINGS GEMAAK KAN WORD

3.1 Gesnyde Lengtes

3.1.1 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

3.1.2 Herstelbare imperfeksies (verwys par. 5).

3.2 Rolle

3.2.1 Binne- en B[illegible] uindsels slegs vir materiaal wat tot dil[illegible] teruggesny is.

OPMERKING:

(a) Warmgewalste walsrandrolle word direk vanaf die Warmbandwalse voorsien, en mag tot en met 7 meters buite dikte toleransie per rol (albei ente ingesluit) bevat wat onvoorwaardelik deur die klant aanvaar moet word.

(b) Koudgewalste rolle wat sonder terugsnyding tot dikte bestel word, mag tot 50 meters (albei ente ingesluit) buite diktetoleransie wees, wat die klant moet aanvaar sonder om enige eis in te stel.

3.2.2 Nie-herstelbare imperfeksies (oppervlak en/of breekskade).

4. TOELATINGSBELEID

Walsdefekte wat afkeur[illegible] tot gevolg het, wat die persentasie hieronder gespesifiseer oorskry, kan op Yskor se rekening geplaas word op die grondslag van 'n gewysigde eistoelating.

Die nakoming moet gebaseer word op minstens 50% van die bestelde massa per omstrede item.

4.1 Gesnyde lengtes

4.1.1 Toelaatbare persentasie afkeurings ten opsigte van bestelde massa per item - 1%.

4.1.2 Afsonderlike pakke

8% afkeurings moet aanvaar word sonder dat enige eis ingestel word.

Enige pak met 'n klaarblyklike hoë frekwensie van walsimperfeksies mag opsy gesit word vir klagteondersoek.

Wanneer daar vasgestel word dat afkeurings meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n pak so spoedig as praktïes moontlik staak, nadat die 8% minimum van die verskeepte massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die afkeurings 8% of minder is, moet die afkeurings ingesluit word vir die bepaling van die algehele gemiddelde vlak van afkeurings (verwys paragraaf 4.1.1). Indien meer as 8% sal die pak onderworpe wees aan afsonderlike onderhandeling.

GENERAL : ALLOWANCE POLICY

1. INTRODUCTION

The production of Hot Rolled, Cold Rolled and Galvanised sheet involves vari[illegible]ions inherent in the steel and processing, which prevent the realisation of complete conformity to the product attributes desired by the customer.

The information set forth below is intended to give the Corporation's Customers a clear understanding of its responsibilities relating to the most common variations in sheet produced in coils and cut lengths.

2. SURFACE INSPECTION

It is common practice to inspect the top surface of cut lengths as they are sheared to length from coils. Coils are not inspected, but the side with the specified surface finish will be identified. Because the top side of a cut length or identified side of a coil is the side with the specified surface finish, the opposite side may contain more frequent surface imperfections.

Precautionary measures should be taken to use the identified side for the most critical surface of a fabricated part.

Coils contain more surface imperfections than cut lengths as it is not possible to reject and sort portions containing such imperfections, as is the case with cut lengths.

3. MILL DEFECTS FOR WHICH ADJUSTED CLAIM ALLOWANCE CAN BE MADE

3.1 Cut Lengths

3.1.1 Non-repairable imperfections (surface and/or breakage).

3.1.2 Repairable imperfections (refer paragraph 5).

3.2 Coils

3.2.1 Inner and outer wraps for material cut back to thickness only.

NOTE:

(a) Mill run, mill edge coils are supplied direct from the Hot Strip Mills and may contain up to 7 metres per coil (both ends included) out of thickness tolerance which customer must accept without claim.

(b) Cold-rolled coils ordered not cut back to thickness, may contain up to 50 metres (both ends included) out of thickness tolerance which the customer must accept without claim.

3.2.2 Non-repairable imperfections (surface and/or breakage).

4. ALLOWANCE POLICY

Mill defects resulting in rejections exceeding the percentage specified below are chargeable to Iscor on an adjusted claim allowance basis.

The performance must be based on at least 50% of the ordered mass per item in dispute.

4.1 Cut Lengths

4.1.1 Percentage reject allowance on ordered mass per item - 1%.

4.1.2 Individual lifts

8% rejections must be accepted without claim.

Any lift with an apparently high frequency of mill imperfections may be set aside for claims investigation.

When rejections are determined to be over 8%, at least 8% of the lift will have to be processed to enable a reasonable assessment to be made of the reject level. The processor should discontinue the processing of such a lift as promptly as practicable after processing the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications. If rejections are 8% or less, these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.1.1). If more than 8%, the lift will be subject to separate negotiation.

EISE : TOELATINGSBELEID (VERVOLG)

4.2 Rolle

4.2.1 Toelaatbare persentasie afkeurings op bestelde massa per item:
3% op 200 ton en meer
4% op 100 ton tot onder 200 ton
5% op onder 100 ton
Bogenoemde toelaatbare persentasie afkeurings kan soos volg gewysig word:

(a) Dit sal met 1% verminder word as 3.2.1. nie in die afkeuringsakkumulering ingesluit is nie.

(b) Dit sal met 1% verminder word as 3.2.2 nie in die afkeuringsakkumulering ingesluit is nie.

4.2.2 Afsonderlike rolle
10% afkeurings moet aanvaar word sonder dat enige eis ingestel word. Enige rol met klaarblyklike hoë frekwensie van walsimperfeksies, mag opsy gesit word vir klagteondersoek.
Wanneer daar vasgestel word dat afkeurings meer as 10% uitmaak sal minstens 10% van die rol verwerk moet word, om 'n redelike raming te kan maak van die afkeuringsvlak. Die verwerker moet die verwerking van so 'n rol so spoedig as prakties moontlik staak, nadat die 10% minimum van die verskeepte massa van die afsonderlike rol verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die afkeurings 10% of minder is, moet die afkeurings ingesluit word in die bepaling van die algemene gemiddelde vlak van afkeuring (verwys na paragraaf 4.2.1). Indien meer as 10%, sal die rol onderworpe wees aan afsonderlike onderhandeling.

5. EISE VIR METAALAFWERKING VAN HERSTELBARE IMPERFEKSIES VAN TOEPASSING OP MATAFWERKING-BLOOTGESTELDE BUITEAANWENDINGS (ISF) ALLEEN (VOORSIEN AS GESNYDE LENGTES)
Dié materiaal word gelewer met dien verstande dat 'n mate van herverwerking deur die klant aanvaarbaar moet wees. Ooreenkomstig die algemene eisetoelatingsbeleid is die volgende van toepassing:

5.1 Totale massa per bestelde item
Tot en met 1% metaalafwerking van fynplate moet deur klant aanvaar word sonder dat enige eis ingestel word. 1% beteken hier dat 1% van die oppervlakarea metaalafgewerk moet wees.

5.2 Afsonderlike pakke
8% metaalafwerking moet aanvaar word sonder dat enige eis ingestel word. Enige pak wat klaarblyklik 'n hoë frekwensie van metaal-afwerking vereis, mag opsy gesit word vir klagteondersoek. Wanneer daar vasgestel word dat die metaalafwerking verlang meer as 8% uitmaak sal minstens 8% van die pak verwerk moet word om 'n redelike raming te kan maak van die metaalafwerking verlang. Die verwerker moet die verwerking van so 'n pak so spoedig as prakties moontlik staak, nadat die 8% minimum van verskeepte massa van die afsonderlike pak verwerk is, ten einde die moontlike bruikbaarheid van die materiaal te bewaar vir ander aanwendings. Indien die metaalafwerking verlang 8% of minder is, moet die metaalafwerking verlang ingesluit word vir die bepaling van die algehele gemiddelde vlak van metaalafwerking (verwys na paragraaf 5.1).
Indien meer as 8% sal die pak onderworpe wees aan afsonderlike onderhandeling.

5.3 Eise vir herstelbare defekte van toepassing op ander oppervlakafwerkings en/of produkte (bv. warmgewals) word nie normaalweg deur die Korporasie aanvaar nie, hoewel, enige sodanige eis wat ingedien word sal volgens meriete behandel word en is onderhewig aan onderhandeling.

6. ALGEMEEN
Die bedrag van enige eis is beperk tot die prys wat vir die betrokke produk betaal is, plus vervoerkoste deur die koper betaal.
Die werklike toelating is die totale persentasie van opgehoopte afgekeurde persentasies, gebaseer op massa per bestelde item, min die verhaalbare waarde.

CLAIMS : ALLOWANCE POLICY (CONTINUE)

4.2 Coils

4.2.1 Percentage rejects allowance on ordered mass per item:
3% on 200 tons and over
4% on 100 tons to under 200 tons
5% on under 100 tons
Adjustment sto the above percentage allowance may be made as follows:

(a) 1% will be deducted when 3.2.1 is not included in the rejection accumulations.

(b) 1% will be deducted when item 3.2.2 is not included in the rejection accumulations.

4.2.2 Individual coils
10% rejctions must be accepted without claim. Any coil with an apparantly high frequency of mill imperfections, may be set aside for claims investigations. When rejections are determined to be over 10% at least 10% of the coil will have to be processed to enable a reasonable assessment to be made of the reject level. The processor must discontinue the processing of such coil as promtly as practicable after processing the 10% minimum of shipped mass of the individual coil in order to preserve the possible usefulness of the material for other applications. If rejections are 10% or less these rejections must be incorporated for determining the overall average reject level (refer to paragraph 4.2.1). If more than 10%, the coil will be subject to separate negotiation.

5. CLAIMS FOR METAL FINISHING OF REPAIRABLE IMPERFECTIONS APPLICABLE TO MATT FINISH EXPOSED EXTERIOR APPLICATIONS (ISF) ONLY (SUPPLIED AS CUT LENGTHS)
This materal is supplied on the distinct understanding that some reworking by the customer is to be acceptable. In line with the general claims allowance policy the following will apply:

5.1 Total mass per item ordered
Up to 1% metal finishing of sheets must be accepted by customer without claim. 1% here means 1% surface area to be metal fininshed.

5.2 Individual lifts
8% metal finishing must be accepted without claim. Any lift apparently requiring a high frequency of metal finishing may be set aside for claims investigation. When metal finishing required is determined to be over 8% at least 8% of the lift must be processed to enable a reasonable assessment to be made of the metal finishing required. The processor must discontinue the processing of such lifts as promptly as practicable after processing of the 8% minimum of shipped mass of the individual lift in order to preserve the possible usefulness of the material for other applications.

If metal finishing required is 8% or less, the metal finishing required must be incorporated for determining the overall average metal finishing level (refer to paragraph 5.1).
If more than 8%, the lift will be subject to a separate negotiation.

5.3 Claims for repairable defects applicable to other surface finishes and/or products (e.g. hot rolled) would not normally be accepted by the Corporation. However, any such claim submitted will be treated on merit, and would be subject to negotiation.

6. GENERAL
The amount of any claim is limited to the price paid for product concerned, plus transportation charges paid by the buyer.
The actual allowance will be the total percentage of accumulated rejection percentages, based on mass per ordered item, less the recovery value.

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S.P.E. 141

YSKOR BEPERK ISCOR LIMITED

SUPRASPAN VERSINKTE PROFIELFYNPLAAT

SUPRASPAN GALVANISED PROFILE SHEETS

DECLASSIFIED

SUPRASPAN VERSINKTE PROFIELFYNPLAAT

SUPRASPAN GALVANISED PROFILE SHEETS

VOORWOORD/
PREFACE

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½% mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.

3. Tensy anders bestel, is alle items onderworpe aan 'n 'oormaat' of 'ondermaat' verwys bladsye P3, par. 7 en S3, par. 4.6.

4. Supraspan versinkte profielfynplaat word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die massameter/massameterbrug by die Werke. Enige verwysing na die getal plate op die faktuur, vragbrief of bondel is benaderd en slegs vir inligting.

5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.

6. Normale toetsing en inspeksie, soos in die toepaslike spesifikasies uiteengesit, word uitgevoer.

7. Pryse en ekstras is die wat op die versendingsdatum geld, en is onderworpe aan veranderings sonder kennisgewing.

8. Wanneer fynplate bestel word, moet klante altyd die eindgebruik spesifiseer.

9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½% provided payment is made in accordance with our General Conditions of Sale.

3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - refer pages P3, par. 7 and S3, par. 4.6.

4. Supraspan galvanised profile sheets are sold at a price per metric ton (1 000 kilogram) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of sheets on the invoice or consignment note or bundle is approximate and for information only.

5. Extras and deductions quoted herein are per metric ton unless otherwise stated. Each extra or deduction is separate and distinct.

6. Normal testing and inspection as outlined in the relevant specifications are carried out.

7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.

8. When ordering sheets customers should always state the end use.

9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.

YSKOR BEPERK / ISCOR LIMITED

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK:
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - spesifiseer
   (g) Oppervlak afwerking
   (h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Dikte en Profiel
4. Lengte
5. Deklaagekstras
6. Hardheidsekstras
7. Beperkte kantoorslag
8. Beperking op oor-/ondermaat
9. Verpakking en merking
10. Invoerheffing (R10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Roksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT:
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection - specify
   (e) Certification - type of certificates
   (f) Packing - specify
   (g) Surface finish
   (h) End uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Thickness and Profile
4. Length
5. Coating extras
6. Hardness extras
7. Restricted overlap
8. Restriction on over-/underage
9. Packing and marking
10. Import levy (R10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Roksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

1982-01-01 Kanselleer en vervang uitgawe gedateer 1980-06-20
Cancels and supersedes issue dated

RETRACTED

SUPRASPAN VERSINKTE PROFIELPLAAT — SUPRASPAN GALVANISED PROFILE SHEETS

A. PRYSE/PRICES

1. **BASISPRYS:** (Gebaseer op Handelskwaliteit)

DELTA-RIB & S-RIB : PRIMA/PRIME ..... R541-00 **
S-RIB : TWEEDE GRAAD/SECOND GRADE ..... R434-50 **

** Verwys (a) en (b).

(a) PWV[1]) -gebied: Basisprys per 1000 kg v.o.s. Yskorwerke, Vanderbijlpark, (Sylyn 1414, Bijlkor) plus padvervoer/spoorvrag.
(b) Buite PWV[1]) -gebied: Basisprys per 1000 kg v.o.s. Germiston plus spoorvrag.
[1]) Verwys Kontrolelys par. C.

1. **BASIS PRICE:** (Based on Commercial Quality)

** Refer (a) and (b).

(a) PWV[1]) area: Basis price per 1000 kg f.o.r. Iscor Works, Vanderbijlpark, (Siding 1414, Bijlkor) plus cartage/railage.
(b) Outside PWV[1]) area: Basis price per 1000 kg f.o.r. Germiston plus railage.
[1]) Refer Check List par. C.

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS - QUANTITY EXTRAS/DEDUCTIONS

2.1 **ITEMEKSTRAS/AFTREKKINGS**
Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die Korporasie uitgereik t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.1 **ITEM EXTRAS/DEDUCTIONS**
The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

ITEM	EKSTRA/EXTRA	AFTREKKING/DEDUCTION
TON/TONS	R.c./TON	R.c./TON
20 - < 40	19-10	
40 - < 80	8-15	
80 - <150	0-00	0-00
150 - < 300		5-45
300 - < 500		8-15
500 - <1000		13-10
≥1000		21-20

3. GROOTTE-EKSTRAS/SIZE EXTRAS

3.1 **DIKTE- EN PROFIELEKSTRAS**

3.1 **THICKNESS AND PROFILE EXTRAS**

STANDAARD-DIKTE (mm) NA VERSINKING/ STANDARD THICKNESS (mm) AFTER COATING	S-RIB PROFIEL/PROFILE				DELTA-RIB
	8/76 (b)	8,5/76 (a)	10/76 (b)	10,5/76 (a)	
	R.c.	R.c.	R.c.	R.c.	R.c.
3,0	-	-	16-55	-	-
2,8	-	-	16-10	-	-
2,5	-	-	15-30	-	-
2,2	-	-	14-20	-	-
2,0	-	-	12-85	-	-
1,6	-	-	11-55	-	9-95
1,2	14-65	13-00	9-65	8-50	8-35
1,0	12-85	11-55	7-85	6-65	6-50
0,8	9-00	7-90	5-35	4-15	5-80
0,6	2-45	1-55	1-40	0-00	10-65
0,5	-	12-85 *	-	7-10 *	11-15

* Wolhard alleenlik
(a) Nie aanbeveel vir eindgebruik-watertenks
(b) Nie gewaarborg vir eindgebruik - watertenks (Verwys para. 8)

* Full hard only
(a) Not recommended for end use - watertanks
(b) Not guaranteed for end use - watertanks (Refer para. 8)

SUPRASPAN VERSINKTE PROFIELFYNPLAAT (VERVOLG)

SUPRASPAN GALVANISED PROFILE SHEETS (CONTINUED)

3.2 STANDAARDLENGTE-EKSTRA

3.2 STANDARD LENGTH EXTRA

PROFIEL/ PROFILE	STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	STANDAARDLENGTES (IN TRAPPE VAN 100 mm)/ STANDARD LENGTHS (IN INCREMENTS OF 100 mm)	EKSTRA/ EXTRA
	(mm)	(m)	
S-RIB			R.c.
8/76	0,6 - 1,2	3,9 - 15,0)	
8,5/76	0,5 - 1,2	3,3 - 15,0)	0-00
10/76	0,6 - 3,0	3,9 - 15,0)	
10,5/76	0,5 - 1,2	3,3 - 15,0)	
10/76	2,0 - 3,0	2,5 - 3,6	8-75
DELTA-RIB	0,5 - 1,6	3,3 - 15,0	0-00

Nota: - Lengtes nie in bostaande tabel genoem nie, mag voorsien word onderworpe aan onderhandeling.

Note: - Lengths not included in the abovementioned table may be supplied subject to special arrangement.

4. DEKLAAGEKSTRAS/COATING EXTRAS

Supraspan versinkte fynplaat is beskikbaar met sinkdeklae van verskillende massa per vierkante meter waarop die volgende ekstras van toepassing is.

Supraspan galvanised sheet is available with zinc coatings of different mass per square meter for which the following extras apply.

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	DEKLAAGAANDUIDING/ COATING DESIGNATION		
	G.275 (2069)	G.425 (2135)	G.650 (2072)
	R.c.	R.c.	R.c.
3,0	17-50	24-70	37-15
2,8	18-30	27-30	38-85
2,5	19-75	29-45	43-55
2,2	23-10	33-65	50-60
2,0	24-65	37-45	55-40
1,6	31-95	46-75	67-35
1,2	42-10	61-60	89-75
1,0	50-80	74-40	107-35
0,8	62-30	91-10	131-90
0,6	84-10	121-70	171-30
0,5	99-90	143-45	202-95

RECTIFIED

SUPRASPAN VERSINKTE PROFIELPLYNPLAAT (VERVOLG) SUPRASPAN GALVANISED PROFILE SHEETS (CONTINUED)

5. KWALITEITSEKSTRAS / QUALITY EXTRAS

KODE/ CODE	BESKRYWING/DESCRIPTION	EKSTRA/ EXTRA
123	Handelskwaliteit Koolstof 0,15% maksimum/ Commercial Quality Carbon 0,15% maximum	R.c. 0-00
123 2106	Handelskwaliteit in Volhard toestand ($\geq$ 80RB)/ Commercial Quality in Full Hard Condition ($\geq$ 80RB) Beperkings/Limitations (a) Dikte/Thickness 0,5 mm alleenlik/only 0,4 mm - Onderworpe aan bevestiging/Subject to confirmation 0,6 - 1,00 mm - op aansoek/on application	13-75
	Ander Kwaliteite - op aansoek/Other Qualities - on application	

6. BEPERKING OP OOR- OF ONDERMAAT / TOELATING (Verwys bladsy S3, Par. 4.6) / LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE (Refer page S3, par. 4.6)

(i) 50% van standaard oor- of ondermaat toelating (2408) ..... R 8-80
(ii) *Vir gespesifiseerde minimum hoeveelhede (2440) ..... R 3-50
*Vir gespesifiseerde maksimum hoeveelhede (2293) ..... R 3-50

*(Uitsluitende ekstras vir beperkings op oor- of ondermaat).

(i) 50% limitation on standard overage or underage (2408) ..... R 8-80
(ii) *For specified minimum quantities (2440) ..... R 3-50
*For specified maximum quantities (2293) ..... R 3-50

*(Excluding extras for restrictions on overage or underage).

7. VERPAKKINGS-EKSTRAS/ PACKING EXTRAS

7.1 STANDAARDVERPAKKING
7.1.1 Bondelgrootte
(i) Delta-Rib -
5 Ton (Kode 01) Alle lengtes soos per Bladsy P2 Par. 3.2 ..... R 0-00
(ii) S-Rib -
5 Ton (Kode 01) Alle lengtes soos per Bladsy P2 Par 3.2 ..... R 0-00

7.1 STANDARD PACKING
7.1.1 Bundle Size
(i) Delta-Rib -
5 Tons (Code 01) All lengths as per Page P2 Par. 3.2 ..... R 0-00
(ii) S-Rib -
5 Tons (Code 01) All lengths as per Page P2 par. 3.2 ..... R 0-00

8. PROFIELE 8/76 EN 10/76 VIR WATERTENKS/ PROFILES 8/76 AND 10/76 FOR WATER TANKS

8.1 Beperkte kant-oorslag (2076) ..... R 6-65

8.2 Lengte-ekstra:-

STANDAARDLENGTES (IN TRAPPE VAN 300 MM)/ STANDARD LENGTHS (IN INCREMENTS OF 300 MM)	EKSTRA/EXTRA
M	R.c.
1,8 - 3,6	8-75
3,9 - 15,0	0-00

8.3 Verpakkings-ekstras
8.3.1 Standaardverpakking
(a) Bondelgrootte
(i) 5 ton (kode 01/50) ..... R 0-00
(ii) 2.5 ton (kode 02/50) R11-20
(b) Handbondels saamgebind (slegs van toepassing op 0,60 mm dikte in lengtes 3,6 m)
(i) 5 ton (kode 04/50) R16-90
(ii) 2.5 ton (kode 05/50) R27-90

8.1 Restricted overlap (2076) ..... R 6-65

8.2 Length extras:-

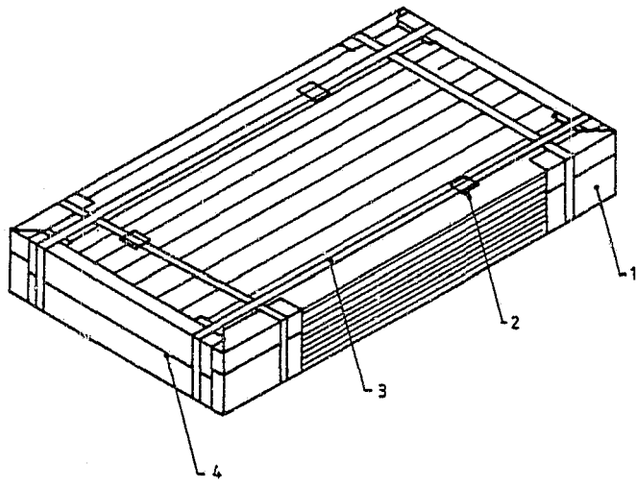
8.3 Packing Extras
8.3.1 Standard Packing
(a) Bundle size
(i) 5 tons (code 01/50) ..... R 0-00
(ii) 2.5 tons (code 02/50) R11-20
(b) Hand bundles strapped together (only applicable to thickness 0,6 mm in lengths 3,6 m)
(i) 5 tons (code 04/50) R16-90
(ii) 2.5 tons (code 05/50) R27-90

YSKOR BEPERK ISCOR LIMITED

KODE / CODE 00

PROFIELPLAAT/PROFILE SHEETS

Onbeskermde verpakking sonder papier
Unprotective packing without paper



1 HOEKSTUT
CORNER BRACKET

2 SEËL
SEAL

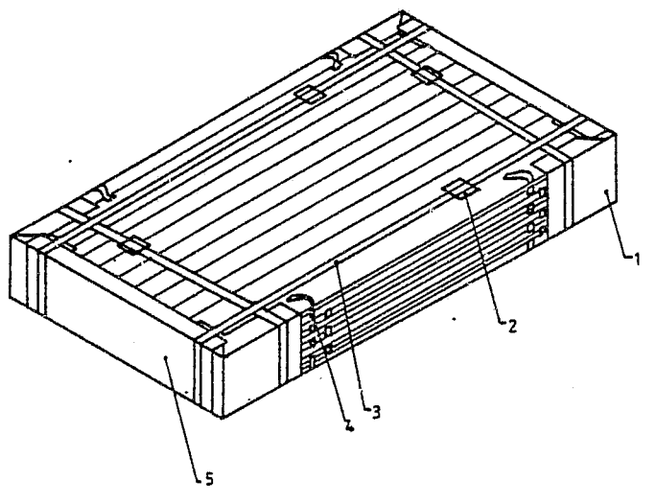
3. BAND
STRAP

4. HOEKPLAAT
ANGLE BRACKET

KODE / CODE 00

PROFIELPLAATHANDBONDELS/PROFILE SHEET HAND BUNDLES

Onbeskermde verpakking sonder papier.
Unprotective packing without paper.



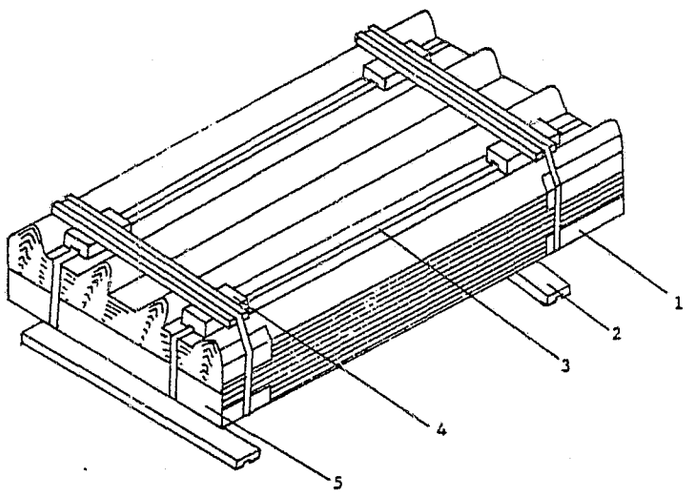
1. HOEKSTUT
   CORNER BRACKET.
2. SEËL
   SEAL
3. BAND
   STRAP
4. PROFIEL BAND
   PROFILE STRAP
5. HOEKPLAAT
   ANGLE BRACKET.

YSKOR BEPERK ISCOR LIMITED

KODE/CODE 03

DELTA RIB

Onbeskermde verpakking sonder papier op dwarsglyplanke.
Unprotective packing without paper on cross wise skids.



MATERIAAL LENGTE (m) MATERIAL LENGTH (m)	AANTAL DWARS GLYPLANKE NO. OF CROSS SKIDS
0,6 < 5,0	2
5,0 < 10,0	3
10,0 ≤ 15,0	4

* Glyplanke word met bande aan stapel vasgebind.
Skids are strapped to bundle.

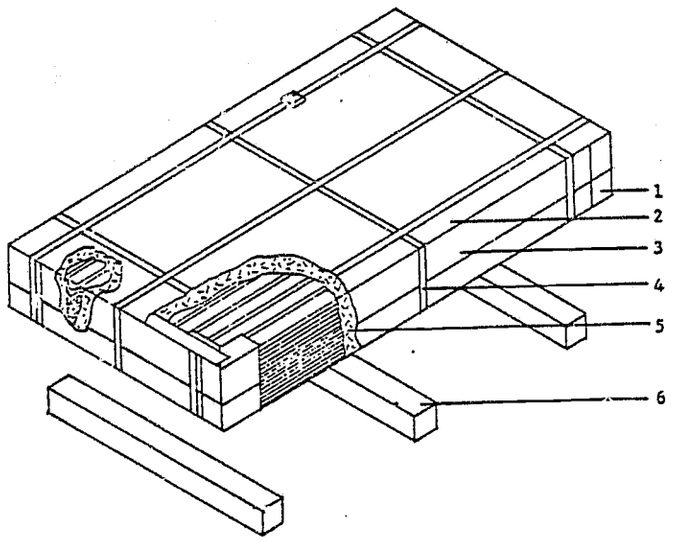
1. HOEKSTUT
   CORNER BRACKET
2. DWARSGLYPLANK
   CROSS WISE SKID
3. BAND
   STRAP
4. STUTBLOK
   SUPPORTING BLOCK
5. HOEKPLAAT
   ANGLE BRACKET

DECLASSIFIED

KODE/CODE 33

PROFIELPLAATSTAPELS/PROFILE BUNDLES

Beskermde verpakking met papier op dwarsglyplanke
Protective packing with paper on cross wise skids.



MATERIAAL LENGTE (mm) MATERIAL LENGTH (mm)	AANTAL DWARS-GLYPLANKE NO. OF CROSS SKIDS
0,6 < 5,0	2
5,0 < 10,0	3
10,0 ≤ 15,0	4

* Glyplanke word met bande aan stapel vasgebind.
Skids are strapped to bundle.

1. HOEKSTUT
   CORNER BRACKET
2. DEKPLAAT
   COVER SHEET
3. HOEKPLAAT
   ANGLE BRACKET
4. BAND
   STRAP
5. WATERWERENDE PAPIER
   WATER REPELLENT PAPER
6. GLYPLANKE
   SKIDS

DECLASSIFIED

SUPRASPAN VERSINKTE PROFIELVYNPLAAT — SUPRASPAN GALVANISED PROFILE SHEETS

B. STANDAARDVERVAARDIGINGSPRAKTYK / STANDARD MANUFACTURING PRACTICE

1. SPESIFIKASIES

1.1 SPESIFIKASIE

Hierdie spesifikasie het betrekking op Handelskwaliteit-Profielfynplaat vervaardig uit 'n koolstofstaalfynplaat en bedek met sink (versink) deur die aaneenlopende warmdompelversinkingsproses.

1.2 DEKLAAGADHESIE

Adhesie moet sodanig wees dat daar geen afvlokking van die deklaag by die voltooide patroon sal wees nie.

1.3 DEKLAAGMASSA

Die massa van die sinkdeklaag is die totale hoeveelheid sink op albei kante van die fynplaat uitgedruk in gram per vierkante meter van die fynplaat.
Die massa van die sinkdeklaag vir die verskillende deklaagaanduidings moet voldoen aan die vereistes vir "Triple"- en "Single Spot" - minimumtoetsperke volgens die volgende tabel:-

1. SPECIFICATIONS

1.1 SPECIFICATION

This specification refers to Commercial Quality Profile Sheets produced from a carbon steel sheet zinc coated (galvanised) by the continuous hot-dip galvanising process.

1.2 COATING ADHERENCE

Coating adherence shall be such that there will be no flaking of the coating in the finished pattern.

1.3 COATING MASS

The mass of the coating is the total amount of zinc on both sides of the sheet expressed in grams per square metre of sheet.
The mass of the coating for the various coating designations shall conform to the requirements for Triple and Single Spot minimum check limits according to the following table:-

DEKLAAG-AANDUIDING/ COATING DESIGNATION	MASSA VAN DEKLAAG IN GRAM PER m^2/MASS OF COATING IN GRAMS PER m^2	
	'TRIPLE SPOT TEST' MIN. DEKLAAG/ TRIPLE SPOT TEST MIN. COATING	'SINGLE SPOT TEST' MIN. DEKLAAG/ SINGLE SPOT TEST MIN. COATING
G275	275	250
G425	425	350
G650	650	550

1.4 Passivering

Profielfynplaat word normaalweg 'n passivering behandeling gegee as beskerming teen klamopberg-vlekkingsgevaar. Die Werke se standaarde vir passivering is vir 'n egalige bedekking 20-40 MG CR/M2 aan albei kante (mikpunt).
Wanneer versinkte materiaal gespesifiseer word "nie gepassiveerd" ka geen aanspreeklikheid deur die Korporasie vir klamopbergvlekking aanvaar word nie.

1.4 Passivation

Profile sheets are normally given a passivation treatment as protection against wet storage stain hazard. Works standards for passivation is for an even coating 20-40 MG CR/M2 both sides (aim).
When galvanised material is specified unpassivated no liability can be accepted by the Corporation for wet storage stain.

2. GROOTTEREEKS

2.1 STANDAARDDIKTE (mm) (NA VERSINKING)

3,0; 2,8; 2,5; 2,2; 2,0; 1,6; 1,2; 1,0; 0,8; 0,6; 0,5.

2.2 PROFIELE EN LENGTE

2. RANGE OF SIZES

2.1 STANDARD THICKNESS (mm) AFTER COATING

3,0; 2,8; 2,5; 2,2; 2,0; 1,6; 1,2; 1,0; 0,8; 0,6; 0,5.

2.2 PROFILES AND LENGTH

PROFIEL/ PROFILE	STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING mm	STANDAARDLENGTES (IN TRAPPE VAN 100 mm)/ STANDARD LENGTHS (INCREMENTS OF 100 mm) Meter/Metres
S-RIB		
8/76	0,6 - 1,2	3,9 - 15,0
8,5/76	0,5 - 1,2	3,3 - 13,0
10/76	0,6 - 3,0	3,9 - 15,0
10,5/76	0,5 - 1,2	3,3 - 15,0
DELTA-RIB	0,5 - 1,6	3,3 - 15,0

3. BEREKENDE GETAL METER PER TON

3. CALCULATED NUMBER OF METRES PER TON

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	NOMINALE GETAL METER PER TON BEDEKTE FYNPLAAT/ NOMINAL NUMBER OF METRES PER TON OF COATED SHEET				
		S-RIB			DELTA-RIB
	8/76	8,5/76	10/76	10,5/76	
	DEKLAAGAANDUIDING / COATING DESIGNATION				
(mm)	G275				
3,0	-	-	47	-	-
2,8	-	-	50	-	-
2,5	-	-	56	-	-
2,2	-	-	63	-	-
2,0	-	-	70	-	-
1,6	-	-	86	-	75
1,2	142	136	114	111	100
1,0	170	163	137	133	120
0,8	210	201	170	168	150
0,6	280	265	225	218	200
0,5	-	318	-	261	240

4. TOLERANSIES/TOLERANCES

4.1 METER PER TON

Die toelaatbare afwyking onder die nominale getal meter per ton geneem oor al die fynplate van een grootte en een dikte na een bestemming is soos volg:-

MASSA VERSEND PER ITEM (TON)/ CONSIGNMENT MASS PER ITEM (TONS)	TOELAATBARE AFWYKING ONDER NOMINALE GETAL METER PER TON/ PERMISSIBLE VARIATION BELOW NOMINAL METRES PER TON	
	G275	G425/650
	%	%
< 5	10,0	20
5 - 20	7,0	14
⩾20	3,5	7

OPMERKING

Vir enige gespesifiseerde deklaag kan die nominale basismetaaldikte verkry word deur 0,04 mm van die bestelde dikte (na versinking) af te trek.

4.1 METER PER TON

The permissible variation below the nominal number of metres per ton, taken over all the sheets of one size and one thickness to one destination shall be the following:-

NOTE

For any specified coating the nominal base metal thickness may be obtained by deducting 0,04 mm from the ordered coated thickness.

4.2 LENGTETOLERANSIE

Onder (-) Geen
Oor (+) 20 mm

4.2 LENGTH TOLERANCE

Under (-) Nil
Over (+) 20 mm

4.3 PROFIELTOLERANSIE

4.3 PROFILE TOLERANCE

	S-RIB mm	DELTA-RIB mm
(i) Diepte van Profiel / Depth of Profile	17,5 (maks/max)	46,5 (maks/max)
Dieptetoleransie / Depth Tolerance		
Standaardproduk/Standard Product	+0 - 1,5	+0 - 2,0
Vol-hard-produk/Full Hard Product	+0 - 2,5	+0 - 4,0
(ii) Wydte tussen buitenste Kruine van Profiel/ Width between outermost Crests of Profile		
8/76 en/and 8,5/76	610	-
10/76 en/and 10,5/76	762	-
Delta-Rib	-	750
Wydtetoleransie tussen die buitenste kruine of tussen enige twee naasgeleë kruine - / Tolerance between width of outermost crest or between any two adjacent crests -		
Standaardproduk/Standard Product	+3,0 - 3,0	+3,0 - 3,0
Vol-hard-produk/Full Hard Product	+5,0 - 5,0	+6,0 - 6,0

4.4 NIE-HAAKS-TOLERANSIE

Nie-haaks is die grootste afwyking van 'n kant van 'n reguit lyn reghoekig met 'n sy en rakende die een hoek. Die nie-haaks-toleransies vir profiel fynplaat is soos volg:-

4.4.1 Lengtes < 4,8 m - alle diktes -
8/76 en 8,5/76 ..... 7,5 mm
10/76; 10,5/76 en Delta-Rib .. .. 9,0 mm

4.4.2 Lengtes ⩾4,8 - 12,3 m - alle diktes
8/76 en 8,5/76 ..... 15,0 mm
10/76; 10,5/76 en Delta-Rib .... 18,0 mm

4.4 OUT OF SQUARE TOLERANCE

Out of square is the greatest deviation of an edge from a straight line at right angles to a side and touching one corner. The out of square tolerances for profile sheets are as follows:-

4.4.1 Lengths < 4,8 m - all thicknesses -
8/76 and 8,5/76 ..... 7,5 mm
10/76; 10,5/76 and Delta-Rib ..... 9,0 mm

4.4.2 Lengths ⩾4,8 - 12,3 m - all thicknesses
8/76 and 8,5/76 ..... 15,0 mm
10/76; 10,5/76 and Delta-Rib ..... 18,0 mm

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4. TOLERANSIES (VERVOLG)/TOLERANCES (CONTINUED)

4.5 PLATHEID TOLERANSIE

4.5.1 Enige fynplaat 0,6 mm dik wat op 'n plat horisontale oppervlak geplaas word kan ligte kant rimpels hê, nie hoër nie as 2,0 mm wat voorkom langs die kantoorslag.

4.5.2 Vir fynplate 0,6 mm dik en 3,60 m lank word 'n maksimum afwyking van 5,0 mm vanaf 'n plat horisontale vlak toegelaat.

NOTA:
Vir materiaal in die volhard toestand word die bogenoemde toleransies (par. 4.4 en 4.5) verdubbel.

4.6 OORMAAT EN ONDERMAAT

Die reg word voorbehou om materiaal wat bestel is, te voorsien binne die volgende toleransies:-

4.5 FLATNESS TOLERANCE

4.5.1 Any sheet 0,6 mm thick laid on a flat horizontal surface is permitted to have light edge ripples not higher than 2,0 mm occurring along the side laps.

4.5.2 For sheets 0,6 mm thick and 3,60 m long a maximum deviation of 5 mm from a flat horizontal surface is permitted.

NOTE:
For material in the full hard condition the abovementioned tolerances (par. 4.4 and 4.5) are doubled.

4.6 OVERAGE AND UNDERAGE

The right is reserved to supply the tonnage ordered within the following tolerances:-

MASSA VAN BESTELDE ITEMS OF DIE BEREKENDE MASSA VAN AANTAL PLATE BESTEL/ MASS OF ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF SHEETS ORDERED	OORMAAT (+)/ONDERMAAT (-)/ OVERAGE (+)/UNDERAGE (-)
TON(S)	TON(S)
2 - < 5	+1 -1
5 - < 10	+2 -3
10 - < 20	+3 -4
20 - < 40	+4 -5
40 - < 100	+4 -6
≥ 100	+6 -10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Vir beperkings op bogenoemde toleransie verwys bladsy P3, par. 6.

Where a minimum or maximum quantity is specified, the overage or underage will be the total of the applicable plus and minus tolerance.
For restrictions on the above tolerances refer page P3, par. 6.

5. ALGEMENE INLIGTING/GENERAL INFORMATION

5.1 VERPAKKING

Alle gegalvaniseerde Profiel Fynplate word verpak in bondels, behoorlik gebind deur middel van bande.
Verwys bladsy P3, par. 7.

5.1 PACKING

All galvanised Profile Sheets are packed in bundles suitably tied by means of bands.
Refer Page P3, par. 7.

5.2 DEKKAPASITEIT

Die effektiewe dekwydte van 'n fynplaat nadat voorsiening gemaak is vir een steekoorslag is die volgende:-

5.2 COVERING CAPACITY

The effective covering width of a sheet after making allowance for one pitch overlap is the following:-

PROFIEL/ PROFILE	NOMINALE DEKWYDTE/ NOMINAL COVERING WIDTH
	mm
8/76	572
8,5/76	610
10/76	724
10,5/76	762
SUPRASPAN DELTARIB	750

5.3 SEILE

Alle materiaal versend deur die Werke sal deur seile bedek wees tydens vervoer.

5.3 TARPAULINS

All material dispatched by the Works will be covered by tarpaulins during transit.

S4
SPE141

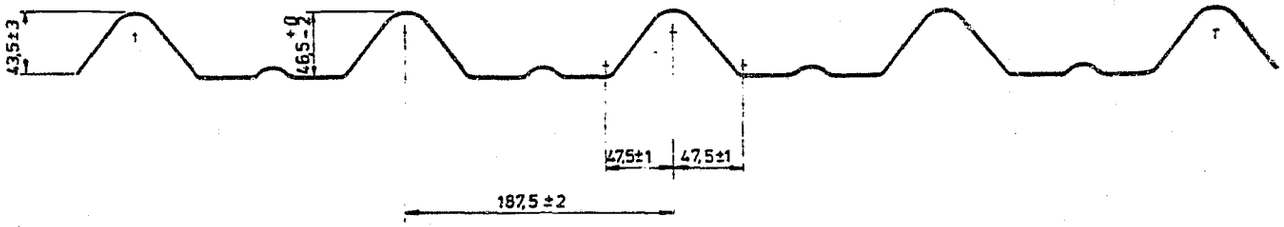
VERSINKTE PROFIELFYNPLAAT

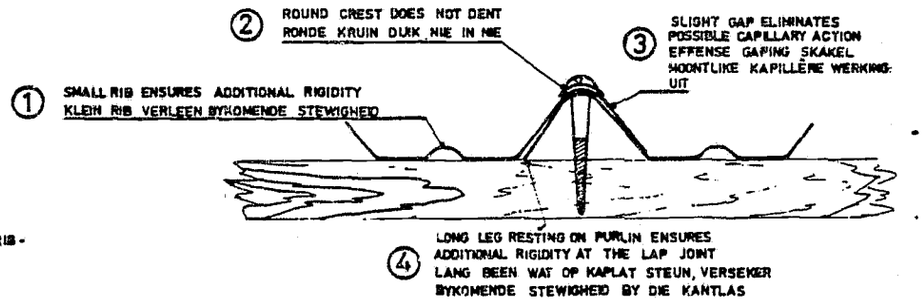
GALVANISED PROFILE SHEETS

SUPRASPAN DELTA - RIB

(STANDARD HARDNESS COMMERCIAL QUALITY SHEETS ONLY)
(SLEGS STANDAARDHARDHEID HANDELSKWALITEIT FYNPLATE)

750 ±3 EFFECTIVE COVERAGE
EFFEKTIEWE DEKWYDTE




2 ROUND CREST DOES NOT DENT
RONDE KRUIN DUIK NIE IN NIE
3 SLIGHT GAP ELIMINATES POSSIBLE CAPILLARY ACTION
EFFENSE GAPING SKAKEL MOONTLIKE KAPILLÊRE WERKING UIT
1 SMALL RIB ENSURES ADDITIONAL RIGIDITY
KLEIN RIB VERLEEN BYKOMENDE STEWIGHEID
4 LONG LEG RESTING ON PURLIN ENSURES ADDITIONAL RIGIDITY AT THE LAP JOINT
LANG BEEN WAT OP KAPLAT STEUN, VERSEKER BYKOMENDE STEWIGHEID BY DIE KANTLAS

NOTE: INFORMATION ON THE USE OF DELTA-RIB SHEETS IS AVAILABLE ON APPLICATION
OPMERKING: INLIGTING OOR DIE AANWENDING VAN DELTA-RIB-PLATE IS OP AANVRAAG BESKIKBAAR

1979-01-01

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1974-10-01

VERSINKTE PROFIELFYNPLAAT GEBRUIKSAANWYSINGS

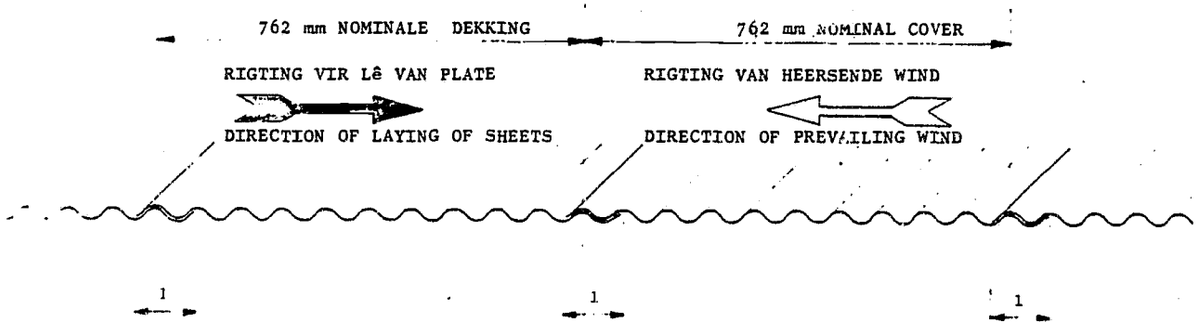
1. Stel heersende windrigting vas.
2. Die profielfynplate word in die teenoorgestelde rigting gelê.
3. Indien daar van links na regs gelê word, sorg dat die afwaartse kant van die plate aan die linkerkant is. Indien nie, draai die plate deur 180° om oor die lengte. (Vir die lê van regs na links is die afwaartse kant aan die regterkant).
4. Daar word aanbeveel dat die een plaat bo die ander geplaas word soos in die skets hieronder aangedui.
5. Maak voorsiening vir 'n entoorslag van minstens 150 mm en 'n helling van minstens 5° om .

10,5/76 mm VERSINKTE PROFIELFYNPLAAT IN LANG LENGTES

GALVANISED PROFILE SHEETS GUIDANCE FOR USE

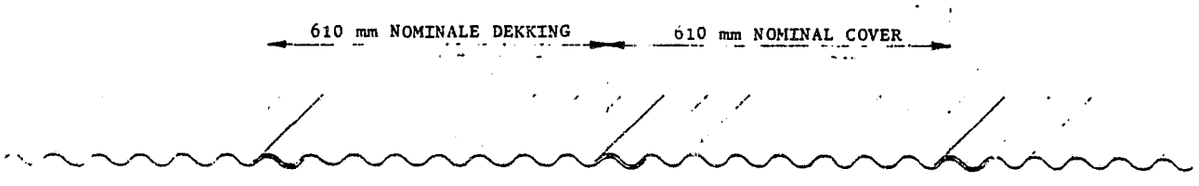
1. Determine direction of prevailing wind.
2. Profile sheets must be laid in opposite direction to that of wind.
3. If the sheets are laid from left to right, see that the downward side of the sheets is on your left. If not, turn the sheets around through 180° on length (For laying from right to left, the downward side is on the right hand side).
4. It is recommended that sheets be placed over one another as indicated in sketch below.
5. Provide for an end overlap of at least 150 mm and a pitch of at least 5° on .

10,5/76 mm GALVANISED PROFILE SHEETS IN LONG LENGTHS



8,5/76 mm VERSINKTE PROFIELFYNPLAAT IN LANG LENGTES

8,5/76 mm GALVANISED PROFILE SHEETS IN LONG LENGTHS



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S.P.E. 142

YSKOR BEPERK ISCOR LIMITED

VERSINKTE PROFIELFYNPLAAT

GALVANISED PROFILE SHEETS

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VERSINKTE PROFIELFYNPLAAT / GALVANISED PROFILE SHEETS

VOORWOORD/ PREFACE

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½% mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.

2. All prices are subject to a settlement discount of 2½% provided payment is made in accordance with our General Conditions of Sale.

3. Tensy anders bestel, is alle items onderworpe aan 'n 'oormaat' of 'ondermaat' verwys bladsye P2, par. 6 en S3, par. 4.5.

3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - refer pages P2, par. 6 and S3, par. 4.5.

4. Versinkte profielfynplaat word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die massameter/massameterbrug by die Werke. Enige verwysing na die getal plate op die faktuur, vragbrief of bondel is benaderd en slegs vir inligting.

4. Galvanised profile sheets are sold at a price per metric ton (1 000 kilogram) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of sheets on the invoice or consignment note or bundle is approximate and for information only.

5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.

5. Extras and deductions quoted herein are per metric ton unless otherwise stated. Each extra or deduction is separate and distinct.

6. Normale toetsing en inspeksie, soos in die toepaslike spesifikasies uiteengesit, word uitgevoer.

6. Normal testing and inspection as outlined in the relevant specifications are carried out.

7. Pryse en ekstras is die wat op die versendingsdatum geld, en is onderworpe aan veranderings sonder kennisgewing.

7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.

8. Wanneer fynplate bestel word, moet klante altyd die eindgebruik-spesifiseer.

8. When ordering sheets customers should always state the end use.

9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.

9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.

10. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.

10. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.

11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD

A.	PRYSE	BLADSY
1.	Basisprys	P1
2.	Hoeveelheidsekstras/Aftrekkings	P1
3.	Grootte-ekstras	P1
4.	Deklaagekstras	P1
5.	Oormaat/Ondermaat Ekstras	P2
6.	Verpakkings Ekstras	P2
B.	STANDAARDVERVAARDIGINGSPRAKTYK	
1.	Spesifikasies	S1
2.	Toleransies	S2 - S3
3.	Algemene Inligting	S3

CONTENTS

A.	PRICES	PAGE
1.	Basis Price	P1
2.	Quantity Extras/Deductions	P1
3.	Size Extras	P1
4.	Coating Extras	P1
5.	Overage/Underage Extras	P2
6.	Packing Extras	P2
B.	STANDARD MANUFACTURING PRACTICE	
1.	Specifications	S1
2.	Tolerances	S2 - S3
3.	General Information	S3

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN

(a) Bestemming
  (i) Posadres
  (ii) Afleweringsadres

(b) Aflewering verlang
  (i) Datum
  (ii) Spoorvervoer
  (iii) Padvervoer

2. PRODUK:

(a) Hoeveelheid (Totale massa van elke item)

(b) Afmetings
  (i) Dikte
  (ii) Wydte
  (iii) Lengte

(c) Kwaliteit

(d) Inspeksie verlang - spesifiseer

(e) Sertifisering - tipe sertifikate

(f) Verpakking - spesifiseer

(g) Oppervlak afwerking

(h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Dikte en Profiel
4. Lengte
5. Deklaagekstras
6. Beperkte kantoorslag
7. Beperking op oor-/ondermaat
8. Verpakking en merking
9. Invoerheffing (R10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL

(a) Destination
  (i) Postal address
  (ii) Consignment address

(b) Delivery required
  (i) Date
  (ii) Rail Transport
  (iii) Road Transport

2. PRODUCT:

(a) Quantity (Total mass of each item)

(b) Dimensions
  (i) Thickness
  (ii) Width
  (iii) Length

(c) Quality

(d) Inspection - specify

(e) Certification - type of certificates

(f) Packing - specify

(g) Surface finish

(h) End uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Thickness and Profile
4. Length
5. Coating extras
6. Restricted overlap
7. Restriction on over-/underage
8. Packing and marking
9. Import Levy (R10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

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VERSINKTE PROFIELFYNPLAAT / GALVANISED PROFILE SHEETS

A. PRYSE/PRICES

1. **BASISPRYS:** (Gebaseer op Handelskwaliteit)

S-RIB: 1) PRIMA/PRIME ..... R516-50 **
2) TWEEDE GRAAD/SECOND GRADE ..... R412-00 **

** Verwys (a) en (b).

(a) PWV[1]) -gebied: Basisprys per 1000 kg v.o.s. Yskorwerke, Vanderbijlpark, (Sylyn 1414, Bijlkor) plus padvervoer/spoorvrag.

(b) Buite PWV[1]) -gebied: Basisprys per 1000 kg v.o.s. Germiston plus spoorvrag.

[1]) Verwys Kontrolelys par. C.

1. **BASIS PRICE:** (Based on Commercial Quality)

** Refer (a) and (b).

(a) PWV[1]) area: Basis price per 1000 kg f.o.r.Iscor Works, Vanderbijlpark, (Siding 1414, Bijlkor) plus cartage/railage.

(b) Outside PWV[1]) area: Basis price per 1000 kg f.o.r. Germiston plus railage.

[1]) Refer Check List par. C.

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS/QUANTITY EXTRAS AND DEDUCTIONS

2.1 ITEMEKSTRAS/AFTREKKINGS

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.1 ITEM EXTRAS/DEDUCTIONS

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

ITEM	EKSTRA/EXTRA	AFTREKKING/DEDUCTION
Ton/Tons	R.c./Ton	R.c./Ton
2 - < 5	62-65	
5 - < 10	39-00	
10 - < 20	10-40	
20 - < 40	5-20	
40 - <100	0-00	0-00
100 - <200		5-20
200 - <300		10-40
⩾ 300		15-60

3. DIKTE EN PROFIELEKSTRAS/THICKNESS AND PROFILE EXTRAS

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING (mm)	S-RIB PROFIEL/PROFILE	
	8/76 *	10/76 *
	R.c.	R.c.
1,6	-	11-35
1,2	14-35	9-45
1,0	12-60	7-70
0,8	8-85	5-25
0,6	2-40	1-35

* Nie gewaarborg vir eindgebruik-watertenks nie.

* Not guaranteed for end-use watertanks.

4. STANDAARDLENGTE-EKSTRA/STANDARD LENGTH EXTRAS

PROFIEL/ PROFILE	STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	STANDAARDLENGTES (IN TRAPPE VAN 100 mm) / STANDARD LENGTHS (IN INCREMENTS OF 100 mm)	EKSTRA/ EXTRA
	(mm)	(m)	R.c.
8/76	0,6 - 1,2	1,8 - 3,6	0-00
10/76	0,6 - 1,6	1,8 - 3,6	0-00

5. DEKLAAGEKSTRAS/COATING EXTRAS

Versinkte fynplaat is beskikbaar met sinkdeklae van verskillende massa per vierkante meter waarop die volgende ekstras van toepassing is.

Galvanised sheet is available with zinc coatings of different mass per square meter for which the following extras apply.

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING (mm)	DEKLAAGAANDUIDING/ COATING DESIGNATION		
	G.275 (2069)	G.425 (2135)	G.650 (2072)
	R.c.	R.c.	R.c.
1,6	31-95	46-75	67-35
1,2	42-10	61-60	89-75
1,0	50-80	74-40	107-35
0,8	62-30	91-10	131-90
0,6	84-10	121-70	171-30

6. BEPERKING OP OOR- OF ONDERMAAT TOELATING
(Verwys bladsy S2, par. 4.5)/
LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE
(Refer page S2, par. 4.5)

(i)	50% van standaard oor- of ondermaat toelating (2408).....	R 8-80	(i)	50% limitation on standard overage or underage (2408).....	R 8-80
(ii)	Wanneer 2½% oor- of ondermaat van item massa gespesifiseer word (2409) ..... (Slegs van toepassing op items onder 100 ton)	R13-55	(ii)	When 2½% overage or underage of item mass is specified (2409). (Applicable only to items under 100 tons)	R13-55
(iii)(a)	Vir gespesifiseerde minimum hoeveelhede (2440)	R 3-50	(iii)(a)	For specified minimum quantities (2440)	R 3-50
(b)	Vir gespesifiseerde maksimum hoeveelhede (2293) ..... (Uitsluitende ekstras vir beperkings op oor- of ondermaat)	R 3-50	(b)	For specified maximum quantities (2293) ..... (Excluding extras for restrictions on overage or underage)	R 3-50

7. VERPAKKINGSEKSTRAS/PACKING EXTRAS

7.1 STANDAARDVERPAKKING

7.1.1 Bondelgrootte

(i)	5 Ton (Kode 01)	R 0-00
(ii)	2½ Ton (Kode 02)	R11-20

7.1.2 Handbondels saamgebind
Diktes van 0,60 mm tot 'n maksimum lengte van 3,6 m kan in handbondels gepak en gebind word in bondels van:-

(i)	5 ton (Kode 04)	R 3-15
(ii)	2½ ton (Kode 05)	R14-20

7.1 STANDARD PACKING

7.1.1 Bundle Size

(i)	5 Tons (Code 01)	R 0-00
(ii)	2½ Tons (Code 02)	R11-20

7.1.2 Hand bundles strapped together
Thickness 0,60 mm up to a maximum length of 3,6 m can be packed in hand bundles and strapped in bundles of:-

(i)	5 ton (Code 04)	R 3-15
(ii)	2½ tons (Code 05)	R14-20

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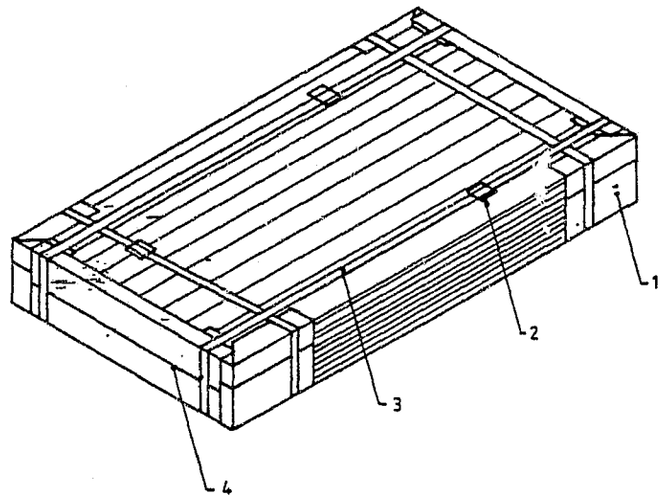
KODE / CODE 00

PROFIELPLAAT/PROFILE SHEETS

Onbeskermde verpakking sonder papier
Unprotective packing without paper



1 HOEKSTUT
CORNER BRACKET

2. SEËL
SEAL

3. BAND
STRAP

4. HOEKPLAAT
ANGLE BRACKET

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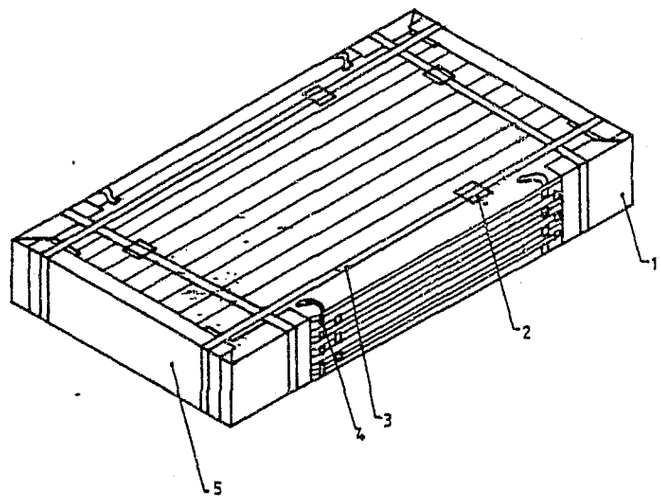
YSKOR BEPERK ISCOR LIMITED

KODE / CODE 00

PROFIELPLAATHANDBONDELS/PROFILE SHEET HAND BUNDLES

Onbeskermde verpakking sonder papier.
Unprotective packing without paper.



1. HOEKSTUT
   CORNER BRACKET.
2. SEËL
   SEAL
3. BAND
   STRAP
4. PROFIEL BAND
   PROFILE STRAP
5. HOEKPLAAT
   ANGLE BRACKET.

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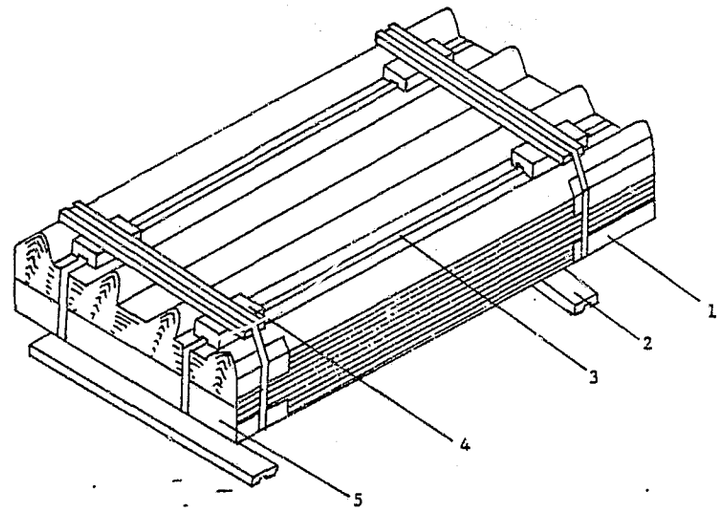
KODE/CODE 03

DELTA RIB

Onbeskermde verpakking sonder papier op dwarsglyplanke.
Unprotective packing without paper on cross wise skids.



MATERIAAL LENGTE (m) MATERIAL LENGTH (m)	AANTAL DWARS GLYPLANKE NO. OF CROSS SKIDS
0,6 < 5,0	2
5,0 < 10,0	3
10,0 ≤ 15,0	4

* Glyplanke word met bande aan stapel vasgebind.
Skids are strapped to bundle.

1. HOEKSTUT
   CORNER BRACKET
2. DWARSGLYPLANK
   CROSS WISE SKID
3. BAND
   STRAP
4. STUTBLOK
   SUPPORTING BLOCK
5. HOEKPLAAT
   ANGLE BRACKET

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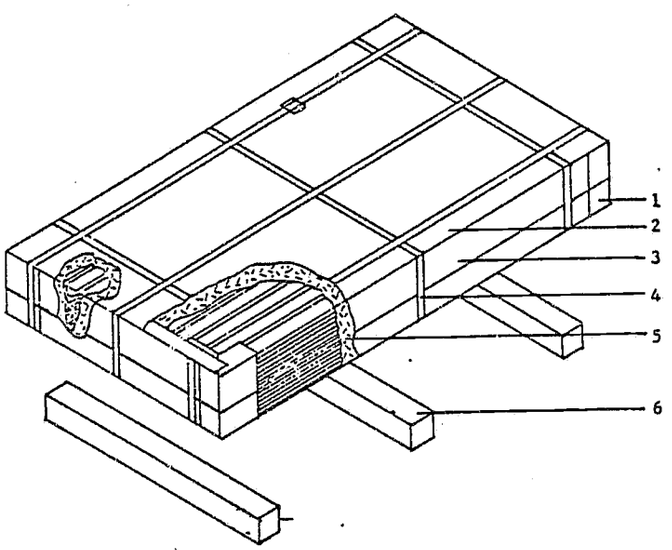
YSKOR BEPERK ISCOR LIMITED

KODE/CODE 33

PROFIELPLAATSTAPELS/PROFILE BUNDLES

Beskermde verpakking met papier op dwarsglyplanke
Protective packing with paper on cross wise skids.



MATERIAAL LENGTE (mm) MATERIAL LENGTH (mm)	AANTAL DWARS-GLYPLANKE NO. OF CROSS SKIDS
0,6 < 5,0	2
5,0 < 10,0	3
10,0 ≤ 15,0	4

* Glyplanke word met bande aan stapel vasgebind.
Skids are strapped to bundle.

1. HOEKSTUT
   CORNER BRACKET
2. DEKPLAAT
   COVER SHEET
3. HOEKPLAAT
   ANGLE BRACKET
4. BAND
   STRAP
5. WATERWERENDE PAPIER
   WATER REPELLENT PAPER
6. GLYPLANKE
   SKIDS

VERSINKTE PROFIELFYNPLAAT / GALVANISED PROFILE SHEETS

STANDAARDVERVAARDIGINGSPRAKTYK/ STANDARD MANUFACTURING PRACTICE

1. SPESIFIKASIES/SPECIFICATIONS

1.1 SPESIFIKASIE

Hierdie spesifikasie het betrekking op Handelskwaliteit-Profielfynplaat vervaardig uit 'n koolstofstaalfynplaat en bedek met sink (versink) deur die aaneenlopende warmdompelversinkingsproses.

1.2 DEKLAAGADHESIE

Adhesie moet sodanig wees dat daar geen afvlokking van die deklaag by die voltooide patroon sal wees nie.

1.3 DEKLAAGMASSA

Die massa van die sinkdeklaag is die totale hoeveelheid sink op albei kante van die fynplaat uitgedruk in gram per vierkante meter van die fynplaat.
Die massa van die sinkdeklaag vir die verskillende deklaagaanduidings moet voldoen aan die vereistes vir 'Triple'- en 'Single Spot' - minimumtoetsperke volgens die volgende tabel:-

1.1 SPECIFICATION

This specification refers to Commercial Quality Profile Sheets produced from a carbon steel sheet zinc coated (galvanised) by the continuous hot-dip galvanising process.

1.2 COATING ADHERENCE

Coating adherence shall be such that there will be no flaking of the coating in the finished pattern.

1.3 COATING MASS

The mass of the coating is the total amount of zinc on both sides of the sheet expressed in grams per square metre of sheet.
The mass of the coating for the various coating designations shall conform to the requirements for Triple and Single Spot minimum check limits according to the following table:-

DEKLAAGAANDUIDING/ COATING DESIGNATION	MASSA VAN DEKLAAG IN GRAM PER m^2/ MASS OF COATING IN GRAMS PER m^2	
	'TRIPLE SPOT TEST' MIN. DEKLAAG/ TRIPLE SPOT TEST MIN. COATING	'SINGLE SPOT TEST' MIN DEKLAAG/ SINGLE SPOT TEST MIN COATING
G275	275	250
G425	425	350
G650	650	550

1.4 PASSIVERING

Profielfynplaat word normaalweg 'n passivering behandeling gegee as beskerming teen klamopbergvlekkingsgevaar. Die Werke se standaarde vir passivering is vir 'n egalige bedekking 20-40 MG CR/M2 aan albei kante (mikpunt)

Wanneer versinkte materiaal gespesifiseer word "nie gepassiveerd" kan geen aanspreklikheid deur die Korporasie vir klamopbergvlekking aanvaar word nie.

1.4 PASSIVATION

Profile sheets are normally given a passivation treatment as protection against wet storage stain hazard. Works standards for passivation is for an even coating 20-40 MG CR/M2 both sides (aim)

When galvanised material is specified unpassivated no liability can be accepted by the Corporation for wet storage stain.

2. GROOTTEREEKS/RANGE OF SIZES

2.1 STANDAARDDIKTE NA VERSINKING (mm)

1,6; 1,2; 1,0; 0,8; 0,6

2.2 PROFIELE EN LENGTE

2.2 STANDARD THICKNESSES AFTER COATING (mm)

1,6; 1,2; 1,0; 0,8; 0,6

2.2 PROFILES AND LENGTH

PROFIEL/ PROFILE	STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING mm	STANDAARDLENGTES (in trappe van 100 mm)/ STANDARD LENGTHS (increments of 100 mm) Meter/Metres
S-RIB		
8/76	0,6 - 1,2	1,8 - 3,6
10/76	0,6 - 1,6	1,8 - 3,6

3. BEREKENDE GETAL METER PER TON/ CALCULATED NUMBER OF METRES PER TON

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	NOMINALE GETAL METER PER TON BEDEKTE FYNPLAAT/ NOMINAL NUMBER OF METRES PER TON OF COATED SHEET	
(mm)	8/76	10/76
1,6	-	84
1,2	140	112
1,0	168	135
0,8	210	169
0,6	280	225

GEKLASSIFISEER

S2
S.P.E. 142
VERSINKTE PROFIELFYNPLAAT

GALVANISED PROFILE SHEETS

4. TOLERANSIES/TOLERANCES

4.1 METER PER TON

Die toelaatbare afwyking onder die nominale aantal meter per ton geneem oor al die fynplate van een grootte en een dikte na een bestemming is soos volg:-

4.1 METRES PER TON

The permissible variation below the nominal number of metres per ton, taken over all the sheets of one size and one thickness to one destination shall be the following:-

MASSA VERSEND PER ITEM (TON)/ CONSIGNMENT MASS PER ITEM (TONS)	TOELAATBARE AFWYKING ONDER NOMINALE AANTAL METER PER TON/ PERMISSIBLE VARIATION BELOW NOMINAL NUMBER OF METRES PER TON	
	G275	G425/650
< 3	10,0%	20%
3 - < 20	7,0%	14%
⩾ 20	3,5%	7%

OPMERKING
Vir enige gespesifiseerde deklaag kan die nominale basismetaaldikte verkry word deur 0,04 mm van die bestelde dikte (na versinking) af te trek.

NOTE
For any specified coating the nominal base metal thickness may be obtained by deducting 0,04 mm from the ordered coated thickness.

4.2 LENGTETOLERANSIE
Onder (-) Geen
Oor (+) 20 mm

4.2 LENGTH TOLERANCE
Under (-) Nil
Over (+) 20 mm

4.3 PROFIELTOLERANSIE

4.3 PROFILE TOLERANCE

	S-RIB (mm)
(i) Diepte van Profiel / Depth of Profile	17,5 (Maks/Max)
Dieptetoleransie / Depth tolerance	+0 - 1,5
(ii) Wydte tussen buitenste Kruine/Width between outermost Crests of Profile van Profiel	
8/76	610
10/76	762
Wydtetoleransie tussen die buitenste kruine of tussen enige twee naasgeleë kruine -	Tolerance between width of outermost crest or between any adjacent crest -	+3,0 - 3,0

4.4 NIE-HAAKS-TOLERANSIE
Nie-haaks is die grootste afwyking van 'n kant van 'n reguit lyn reghoekig met 'n sy en rakende die een hoek.

Die nie-haaks-toleransies vir fynplate is soos volg:

4.4.1 Lengtes 1,8 - 3,6 m; 0,6 - 1,6 mm dik
8/76 .....7,5 mm
10/76 .....9,0 mm

4.4 OUT OF SQUARE TOLERANCE
Out of square is the greatest deviation of an edge from a straight line at right angles to a side and touching one corner.

The out of square tolerances for sheets are as follows:

4.4.1 Lengths 1,8 - 3,6 mm; 0,6 - 1,6 mm thick
8/76 ..... 7,5 mm
10/76 ..... 9,0 mm

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VERSINKTE PROFIELFYNPLAAT — GALVANISED PROFILE SHEETS

4. TOLERANSIES (VERVOLG) / TOLERANCES (CONTINUED)

4.5 OORMAAT EN ONDERMAAT

Die reg word voorbehou om materiaal wat bestel is, te voorsien binne die volgende toleransies:

4.5 OVERAGE AND UNDERAGE

The right is reserved to supply the tonnage ordered within the following tolerances:

MASSA VAN BESTELDE ITEMS OF DIE BEREKENDE MASSA VAN AANTAL PLATE BESTEL/ MASS OF ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF SHEETS ORDERED	OORMAAT (+) / ONDERMAAT (-)/ OVERAGE (+) / UNDERAGE (-)	
TON(S)	TON(S)	
2 - < 5	+ 1	- 1
5 - < 10	+ 2	- 3
10 - < 20	+ 3	- 4
20 - < 40	+ 4	- 5
40 - < 100	+ 4	- 6
≥ 100	+ 6	- 10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Vir beperkings op bogenoemde toleransies verwys bladsy P2, par. 6.

Where a minimum or maximum quantity is specified, the overage or underage will be the total of the applicable plus and minus tolerance. For restrictions on the above tolerances refer page P2, par. 6.

5. ALGEMENE INLIGTING/GENERAL INFORMATION

5.1 VERPAKKING

5.1.1 S-Rib

Getal plate per handbondel ▪

5.1 PACKING

5.1.1 S-Rib

Number of sheets per hand bundle ▪

LENGTE/LENGTH	GESPESIFISEERDE DIKTE/ SPECIFIED THICKNESS 0,6 mm	
	PROFIEL/PROFILE	
	8/76	10/76
m	GETAL PLATE PER HANDBONDEL/ NUMBER OF SHEETS PER HAND BUNDLE	
1,8	16	16
2,1	16	12
2,4	12	12
2,7	12	8
3,0	8	8
3,3	8	8
3,6	8	8

▪ Handbondels is alleenlik in die volgende beskikbaar:-
Profiel : 8/76 en 10/76
Dikte : 0,6 mm
Lengte : 1,8 tot 3,6 m

▪ Hand bundles only available in the following:-
Profile : 8/76 en 10/76
Thickness: 0,6 mm
Length : 1,8 to 3,6 m

5.1.2 Verpakking

Alle gegalvaniseerde Profiel Fynplate word verpak in bondels, behoorlik verbind deur middel van bande.
Verwys bladsy P2, par. 7.

5.1.2 Packing

All galvanised Profile Sheets are packed in bundles suitably tied by means of bands. Refer Page P2, par. 7.

5.2 DEKKAPASITEIT

Die effektiewe dekwydte van 'n fynplaat nadat voorsiening gemaak is vir een steekoorslag is die volgende:-

5.2 COVERING CAPACITY

The effective covering width of a sheet after making allowance for one pitch overlap is the following:-

PROFIEL/ PROFILE mm	NORMALE DEKWYDTE/ NORMAL COVERING WIDTH mm
8/76	572
10/76	724

5.3 SEILE

Alle materiaal versend deur die Werke sal deur seile bedek wees tydens vervoer.

5.3 TARPAULINS

All material dispatched by the Works will be covered by tarpaulins during transit.

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S.P.E. 145

YSKOR BEPERK ISCOR LIMITED

CHROMADEK EN TEXTRADEK MET VERSINKTE SUBSTRAAT

CHROMADEK AND TEXTRADEK WITH GALVANISED SUBSTRATE

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CHROMADEK EN TEXTRADEK MET VERSINKTE SUBSTRAAT

VOORWOORD

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.
3. Tensy anders bestel, is alle items onderworpe aan 'n oormaat of ondermaat - verwys bladsy S5, paragraaf 5.1.
4. Materiaal deur hierdie SPE gedek word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die geykte massameter/massameterbrug by die Werke. Enige verwysing na die getal rolle op die faktuur of vragbrief is slegs vir inligting.
5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.
6. Normale toetsing en inspeksie, soos in die verskillende spesifikasies uiteengesit, word uitgevoer.
7. Pryse en ekstras is dié wat op die versendingsdatum geld, en is onderworpe aan veranderings sonder kennisgewing.
8. Wanneer materiaal bestel word, moet klante altyd die eindgebruik spesifiseer.
9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.
10. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.
11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

INHOUD

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CHROMADEK AND TEXTRADEK WITH GALVANISED SUBSTRATE

PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.
2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.
3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - refer page S5, paragraph 5.1.
4. Material covered by this SPE are sold at a price per metric ton (1 000 kilograms) on gross mass as recorded on the assized mass meter/mass meter bridge at the Works. Any reference to the number of coils on the invoice or consignment note is for information only.
5. Extras and deductions quoted herein are per metric ton, unless otherwise stated. Each extra or deduction is separate and distinct.
6. Normal testing and inspection as outlined in the various specifications are carried out.
7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.
8. When ordering material customers should always state the end use.
9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.
10. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.
11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

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A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer/
      (iii) Padvervoer

2. PRODUK:
   (a) Hoeveelheid (Totale massa van elke item)
   (b) Afmetings
      (i) Dikte
      (ii) Wydte
      (iii) Lengte
   (c) Kwaliteit
   (d) Inspeksie verlang - spesifiseer
   (e) Sertifisering - tipe sertifikate
   (f) Verpakking - spesifiseer
   (g) Oppervlak afwerking
   (h) Eind - gebruike
   (i) Bedekkingsisteem

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Wydte en dikte
4. Lengte
5. Sinkdeklaagekstras
6. Kwaliteit
7. Spesiale verwerking
8. Bedekkingsekstras
9. Verpakkingsekstras
10. Invoerheffing (R10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonarea en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport/
      (iii) Road Transport

2. PRODUCT:
   (a) Quantity (Total mass of each item)
   (b) Dimensions
      (i) Thickness
      (ii) Width
      (iii) Length
   (c) Quality
   (d) Inspection required - specify
   (e) Certification - type of certificates
   (f) Packing - specify
   (g) Surface finish
   (h) End uses
   (i) Coating system

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Width and thickness
4. Length
5. Zinc coating extras
6. Quality
7. Special processing
8. Coating extras
9. Packing extras
10. Import Levy (R10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg Randfontein, Roodepoort-Maraisburg, Sandton, Springs Vanderbijlpark, Vereeniging, Westonarea, and Wonderboom.

DECOMMISSIONED

YSKOR BEPERK — ISCOR LIMITED

CHROMADEK EN TEXTRADEK MET VERSINKTE SUBSTRAAT — CHROMADEK AND TEXTRADEK WITH GALVANISED SUBSTRATE

A. PRYSE/PRICES

1. **Basisprys:** (gebaseer op Handelskwaliteit versinkte fynplaat substraat).

(a) PWV[1]) gebied ..... R650-00 / 1000 kg v.o.s. Yskorwerke Vanderbijlpark (Sylyn 1414 Bijlkor) plus padvervoer/spoorvrag.

(b) Buite PWV[1]) gebied ..... R650-00 / 1000 kg v.o.s. Germiston plus spoorvrag.

2. Hoeveelheidsekstras/aftrekkings

2.1 Itemekstras/aftrekkings

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die korporasie uitgereik t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

1. **Basis Price:** (based on Commercial Quality galvanised sheet substrate).

(a) PWV[1]) area ..... R650-00 / 1000 kg f.o.r. Iscor Works Vanderbijlpark (Syding 1414 Bijlkor) plus cartage/railage.

(b) Outside PWV[1]) area ..... R650-00 / 1000 kg f.o.r. Germiston plus railage.

2. Quantity extras/deductions

2.1 Item extras/deductions

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for despatch to one destination at Work's convenience.

ITEM (TON/TONS)	EKSTRA/EXTRA R.c.	AFTREKKING/DEDUCTION R.c.
< 5	op aansoek/on application	
5 - < 10	20-40	
10 - < 20	10-15	
20 - < 40	4-95	
40 - < 100	0-00	0-00
100 - < 200		5-30
⩾ 200		8-70

2.2 Gespesifiseerde minimum of maksimum hoeveelhede

(a) Vir gespesifiseerde minimum hoeveelhede: 2440
Ekstra ..... R 3-50

(b) Vir gespesifiseerde maksimum hoeveelhede
Ekstra (2293) ..... R 3-50

2.3 Vir gespesifiseerde presiese aantal plate
Ekstra (2170) R14-70

3. Grootte ekstras

3.1 Standaardwydte en dikte ekstras

3.1.1 Smalband in Rolle

2.2 Specified minimum or maximum quantities

(a) For specified minimum quantities: 2440
Extra ..... R 3-50

(b) For specified maximum quantities
Extra (2293) ..... R 3-50

2.3 For specified exact number of sheets
Extra (2170) R14-70

3. Size extras

3.1 Standard width and thickness extras

3.1.1 Slit Strip in Coils

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER GALVANISING (mm)	WYDTE/WIDTH (mm) STANDAARDWYDTES IN 5 mm TRAPPE/STANDARD WIDTHS IN STEPS OF 5 mm		
	150 - < 250	250 - < 400	400 - < 600
2,0	82-95	74-40	67-05
1,6	76-55	68-15	60-65
1,4	71-45	63-00	55-40
1,2	67-20	58-80	51-30
1,0	61-80	53-45	46-00
0,8	56-55	48-05	40-65
0,6	49-30	40-85	33-25
0,5	52-95	44-55	36-95
0,4	60-40	52-05	-

3.1.2 Rolle en Gesnyde Lengtes

3.1.2 Coils and Cut Lengths

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER GALVANISING (mm)	WYDTE/WIDTH (mm) (STANDAARDWYDTES IN 25 mm TRAPPE/STANDARD WIDTHS IN STEPS OF 25 mm)									
	600 - <800	800 - <925	925	>925 - <1000	1000	>1000 - <1200	1200	>1200 - <1500	1500	>1500 - 1600
2,0 (b)	60-40	51-30	44-20	46-00	38-10	40-70	33-80	37-15	-	-
1,6	54-20	45-00	37-90	39-60	31-75	34-40	27-30	30-70	28-90	25-95
1,4	48-95	39-75	32-75	34-50	26-45	29-05	23-31	25-80	23-75	30-35
1,2	44-80	35-50	28-55	30-30	22-35	24-95	18-00	21-45	19-60	27-10
1,0	39-40	30-25	23-15	24-90	17-10	19-65	12-60	16-15	14-25	21-65
0,8	34-00	24-90	17-85	19-60	11-75	14-30	7-30	10-80	9-00	16-40
0,6 (a)	26-90	17-60	10-60	12-30	4-35	7-05	0-00	3-45	-	-
0,5 (b)	30-50	21-40	14-30	16-00	8-20	10-80	3-80	7-20	-	-
0,4 (c)	36-05	27-00	20-00	21-60	13-80	16-55	-	-	-	-

Notas: (a) Maks. wydte 1400 mm
(b) Maks. wydte 1225 mm
(c) Maks. wydte 1050 mm

Note: (a) Max. width 1400 mm
(b) Max. width 1225 mm
(c) Max. width 1050 mm

3. GROOTTE EKSTRAS (vervolg) / SIZE EXTRAS (continued)

3.2 Nie-standaardwydte ekstras

Vir nie-standaardwydtes geld die ekstras soos in die wydte en dikte tabel aangetoon (par. 3.1) plus die volgende

(a) Smalband - Nie-standaard trappe van 1 mm R8-00

(b) Fynplaat/Rolle - Nie-standaard trappe van 5 mm R8-00

3.2 Non standard width extras

For non standard widths the extras shown in the width and thickness table (par. 3.1) apply plus the following

(a) Slit strip - Non standard increments of 1 mm R8-00

(b) Sheets/Coils - Non standard increments of 5 mm R8-00

3.3 STANDAARD LENGTE EKSTRAS (Vir wydtes 600-1600 mm)

3.3 STANDARD LENGTH EXTRAS (For widths 600-1600 mm)

DIKTE NA VERSINKING / THICKNESS AFTER GALVANISING (mm)	STANDAARD LENGTE/STANDARD LENGTH (m) (TRAPPE VAN 25mm)/STEPS OF 25 mm)					
	1,0 - 1,2	>1,2 - 1,5	>1,5 - 2,5	>2,5 - 3,5	>3,5 - 4,5	>4,5 5,0
1,6 - 2,0	23-00	18-75	14-05	14-05	16-85	21-40
0,8 - <1,6	24-00	19-65	15-10	15-10	17-85	22-20
0,6 - <0,8	25-65	21-40	16-70	16-70	19-60	24-00
0,5 - <0,6	27-30	23-00	18-50	18-50	21-35	-
0,4 - <0,5	30-00	25-80	21-20	-	-	-

Lengtebeperkings verwys bl. S2 par. 3.

3.4 Nie Standaard lengte ekstras

Vir nie-standaard lengtes geld die ekstras soos in die standaard lengte tabel (par. 3.3) plus die volgende.

Nie standaard trappe van 5 mm R3-45

Length restrictions - refer page S2 par. 3.

3.4 Non Standard length extras

For non standard lengths the extras shown in in the standard length table (par. 3.3) apply plus the following.

Non standard increments of 5 mm R3-45

4. VERSINKINGEKSTRAS / GALVANISING EXTRAS

Versinkte fynplaat word vervaardig met sinkdeklae van verskillende diktes en die volgende ekstras is van toepassing.

Galvanised sheet is produced with different coating masses of zinc, for which the following extras apply.

DIKTE NA VERSINKING/ THICKNESS AFTER GALVANISING (mm)	SMALBAND SLIT STRIP		FYNPLAATROLLE COILED SHEETS			FYNPLAAT GESNYDE LENGTES SHEET CUT LENGTHS		
	DEKLAAGAANDUIDING / COATING DESIGNATION							
	G185	G275	G185	G275	G425	G185	G275	G425
	R/TON	R/TON	R/TON	R/TON	R/TON	R/TON	R/TON	R/TON
2,0	20-10	28-95	18-95	25-65	39-05	19-30	26-15	39-75
1,6	25-15	35-25	23-75	31-75	48-75	24-20	33-85	49-60
1,4	29-30	40-30	26-00	36-35	54-90	26-45	38-70	55-90
1,2	34-40	46-50	30-65	43-85	64-15	31-20	44-60	65-35
1,0	40-30	56-05	36-35	51-25	75-85	38-70	53-90	78-90
0,8	50-50	70-40	46-00	64-90	94-85	48-50	66-10	96-60
0,6	68-55	94-45	61-50	85-95	125-15	64-25	89-20	129-05
0,5	81-20	111-90	75-05	104-10	149-40	76-35	105-95	152-10
0,4	101-75	140-75	94-45	129-55	-	96-15	131-90	-

5. KWALITEITSEKSTRAS / QUALITY EXTRAS

Aangeduide analises is gietpotanalise

Indicated analyses are ladle analysis

SPESIFIKASIE / SPECIFICATION		EKSTRA/EXTRA
Handelskwaliteit (Koolstof 0,15% maks.)	Commercial Quality (Carbon 0,15% max.)	R.c. 0-00
Sluitvoegkwaliteit (0,4 mm min. dikte; G275 deklaag alleenlik	Lock Forming Quality (0,4 mm min thickness; G275 coating only	17-25
Trekkwaliteit (C 0,08% maks. G275 maks. deklaag)	Drawing Quality (C 0,08% max. G275 max. coating designation)	31-25
Handelskwaliteit (Volhard ≥ 80 RB) [1] (Wydtes < 600 mm - op aansoek)	Commercial Quality (Fullhard ≥ 80 RB) [1] (Widths < 600 mm - on application)	15-00
BS 1449 CR 4	BS 1449 CR 4	7-75

[1]) 0,5 mm alleenlik: Ander diktes tot 1.0 mm maks. ..... op aansoek
0,5 mm only: Other thicknesses up to 1.0 mm max. ..... on application

6. SPESIALE VERWERKINGSEKSTRAS / SPECIAL PROCESSING EXTRAS

6.1 Weging van afsonderlike bondels/rolle en die aanbring van die aangetekende massa op elke bondel/rol ..... R 2-05

6.2 Hersny of haaksny ..... op aanvraag. (Klante moet kennis neem dat skrape op materiaal kan voorkom na snyproses.)

6.1 Weighing of individual bundles/coils and marking the recorded mass on each bundle/coil ..... R 2-05

6.2 Reshearing and resquaring ..... on application. (Customers must note that scratches may occur to material during the cutting process.)

7. BEDEKKINGSEKSTRAS[1] / COATING EXTRAS[1]

Pryse per ton vir een kant bedek en sluit in epoksiegrondlaag en/of kleefmiddel waar van toepassing.

Prices per ton for one side coated and includes epoxy and/or adhesive where necessary.

7.1 VERF EKSTRAS / PAINT EXTRAS

DIKTE NA VERSINKING/ THICKNESS AFTER GALVANISING	VERFTIPE / PAINT TYPE						
	VOLLAAG / FULL COAT *				HALFLAAG / HALFCOAT *		GRONDLAAG/PRIMER
	SILIKON POLIESTER/ SILICON POLYESTER	POLIESTER/ POLYESTER	VINIEL/ VINYL	PLASTISOL/ PLASTISOL	VINIEL/ VINYL	STANDAARDRUG-LAAG [2]/ STANDARD BACKING COAT [2]	EPOKSIE/ EPOXY Grys/ Grey
	R/TON	R/TON	R/TON	R/TON	R/TON	R/TON	R/TON
2.0	32-65	23-70	28-80	77-45	14-70	16-65	5-10
1.6	41-30	29-95	36-45	98-00	18-65	21-05	6-50
1,4	46-90	34-05	41-40	111-30	21-15	23-90	7-35
1.2	55-10	39-95	48-60	130-70	24-85	28-10	8-65
1.0	66-80	48-45	58-95	158-50	30-15	34-05	10-50
0.8	83-65	60-70	73-80	198-45	37-70	42-65	13-10
0.6	114-25	82-90	100-80	271-05	51-50	58-25	17-90
0.5	139-25	101-00	122-85	330-35	62-80	70-80	21-85
0.4	170-85	123-95	150-75	405-35	77-05	87-10	26-80

* Vollaag: Normaalweg aan die sigbare kant van materiaal.
Halflaag: Normaalweg aan agterkant van materiaal.
(1) Grondlaag: Insluitende korrosiewerende pigmente.
(2) Standaardruglaag is normaalweg 'n halflaag poliëster plus epoksie grondlaag.

* Full coat: Normally on facing side of material.
Half coat: Normally on backing side of material.
(1) Primer: Including corrosion inhibitive pigments
(2) Standard backing coat normally is a halfcoat polyester plus epoxy primer.

7.2 FOELIEBEDEKKING EKSTRAS / FILM COATING EXTRAS

DIKTE NA VERSINKING/ THICKNESS AFTER GALVANISING	FOELIETIPE / FILM TYPE			
	HOUTGREIN/ WOODGRAIN	LINNE/ LINEN	MARMER/ MARBLE	EFFEKLEURE/ PLAIN COLOURS
(mm)	R/TON	R/TON	R/TON	R/TON
2.0	147-20	147-20	147-20	141-45
1.6	186-30	186-30	186-30	179-00
1,4	211-60	211-60	211-60	203-30
1.2	248-40	248-40	248-40	238-70
1.0	301-30	301-30	301-30	289-50
0.8	377-20	377-20	377-20	362-45
0.6	515-20	515-20	515-20	495-05
0.5	627-90	627-90	627-90	603-35
0.4	770-50	770-50	770-50	740-35

OPMERKINGS:
(1) Vir verf en/of foelie kombinasies sien bladsy V2 paragraaf 3.

NOTES:
(1) For paint and/or film combination see page V2 paragraph 3.

8. VERPAKKINGSEKSTRAS (BETALING VOLGENS BRUTO MASSA)
PACKING EXTRAS (GROSS MASS CHARGED)

8.1 SMALBAND EN PYNPLAAT IN ROLLE
Rolle is beskikbaar tot 'n maksimum massa (uitgedruk in kg/mm van wydte) soos uiteengesit in die volgende tabel. (Klante moet vanaf die tabel die mees aanvaarbare rolgrootte vir hul behoeftes kies en dit op die bestelling spesifiseer.)

8.1 SLIT STRIP AND SHEET IN COILS
Coils are available to a maximum mass (expressed in kg/mm of width) as set out in the following table. Customers should select from the table and specify on the order the coil size most suited to their requirements.)

8.1.1 EKSTRAS - ROLMASSA
ROLLE GEMONTEER OP OF SONDER WIEGDRAERS

8.1.1 EXTRAS - COIL MASS
COILS MOUNTED ON OR NOT MOUNTED ON CRADLES

MATERIAAL WYDTE MATERIAL WIDTH (mm)	MAKS. kg/mm WYDTE MAX kg/mm WIDTH	KODE CODE	PADVERVOER/ ROAD TRANSPORT		SPOORVERVOER RAIL TRANSPORT	
			SONDER WIEGDRAER WITHOUT CRADLE (38)	OP WIEGDRAER ON CRADLE (34)	OOG HORISONTAAL EYE HORIZONTAL (36)	OOG VERTIKAAL EYE VERTICAL (37)
SMALBAND IN ROLLE/ SLITSTRIP IN COILS	12,50	30	0,00	0,00	0,00	0,00
	6,25	31	0,00	0,00	0,00	0,00
	4,20	32	0,00	0,00	0,00	0,00
	3,15	33	0,00	0,00	0,00	0,00
	2,50	34	0,00	0,00	0,00	0,00
150 - < 600	2,10	35	0,00	0,00	0,00	0,00
ROLLE/COILS 600 - 1 225	*12,50	30	0,00	0,00	0,00	0,00
	6,25	31	0,00	0,00	0,00	0,00
	4,20	32	0,00	0,00	0,00	0,00
	3,15	33	0,00	0,00	0,00	0,00
	2,50	34	0,00	0,00	0,00	0,00
	2,10	35	0,00	0,00	0,00	0,00
	1,80	36	0,00	0,00	0,00	0,00
	1,60	37	0,00	0,00	0,00	0,00
ROLLE/COILS > 1 225 - 1 600	6,25	31	- 0,00	0,00	0,00	0,00
	4,20	32	- 0,00	0,00	0,00	0,00

* Maks. rolmassa is 10 ton.

* Max. coil mass is 10 tons.

8.1.2 Opmerkings
(i) Rolle op wiegdraers word normaalweg slegs vir Spoorvervoer aangebied en deurgaans met die oog in die breedte van 'n trok gelaai. Rolle sonder wiegdraers word slegs vir padvervoer aangebied en met die oog in die lengte rigting van 'n vragmotor gelaai. Indien wiegdraers vir padvervoer aangevra word moet klant spesifiseer in watter rigting die oog van die rol gelaai moet word.

(ii) Bondelgrootte: Rolle strookstaal word deur middel van bande in bondels gebind in groottes om by werkepraktyk te pas.
Gespesifiseerde maksimum bondelmassa ..... Op aansoek

8.1.2 Notes
(i) Coils on cradles are normally for rail transport only and coils are loaded with the eye of the coil tranversely onto the truck. Coils without cradles are normally for road transport only and coils are loaded with the eye of the coil lengthwise onto the motortruck. If cradles for road transport are specified then customer must ensure that the direction of the eye of the coil is specified on the order.
(ii) Bundle size : Coils Slit strip are strapped together to form bundles in sizes to suit Works' practice.

Specified maximum bundle mass ..... On application

UNCONTROLLED

CHROMADEK EN TEXTRADEK MET VERSINKTE SUBSTRAAT / CHROMADEK AND TEXTRADEK WITH GALVANISED SUBSTRATE

8. VERPAKKINGSEKSTRAS/ (vervolg)
PACKING EXTRAS (continued)

Gesnyde lengtes is beskikbaar in die volgende bondelgroottes en tipe verpakking. (Klante moet die geskikste bondelgrootte en tipe verpakking vir hul behoeftes kies en dit op die bestelling aandui):-

Cut sheets are available in the following bundle sizes and type of packing. (Customers should select the bundle size and type of packing best suited to their requirements and state it on the order):-

8.2.1 FYNPLAAT - GESNYDE LENGTES

8.2.1 SHEETS - CUT LENGTHS

TIPE VERPAKKING / TYPE OF PACKING	MATERIAAL WYDTE / MATERIAL WIDTH (mm)					
	600 - 1225				> 1225 - 1600	
	BONDELMASSA (TON)/ BUNDLE MASS (TONS)				BONDELMASSA (TON)/ BUNDLE MASS (TONS)	
	KODE / CODE 03 1,25 t	KODE / CODE 02 2,5 t	KODE / CODE 10 4,0 t	KODE / CODE 01 5,0 t	KODE / CODE 10 4,0 t	KODE / CODE 01 5,0 t
1. Kantbeskermde verpakking met waterdigte papier en/ Edge protective packing with waterproof paper and/ (ii) Lengte en dwarsglyplanke / Length and cross-wise skids Kode / Code 36	(a)0-00	0-00	(b) 0-00	0-00	(b) 0-00	0-00

8.2.2 OPMERKINGS

1. Die Korporasie behou hom die reg voor om bondels te lewer waarvan die massa minder is as die bestelde massa, of om bondels te lewer tot 10% swaarder as die bestelde massa.
2. Min. plaatgrootte - (a) 0,9 m^2 (b) 1,1 m^2

8.2.2 NOTES:

1. The Corporation reserves the right to supply bundles which may have a mass less than the ordered bundle mass, or have a mass up to 10% more than the ordered bundle mass.
2. Min. sheet size - (a) 0,9 m^2 (b) 1,1 m^2

YSKOR BEPERK ISCOR LIMITED

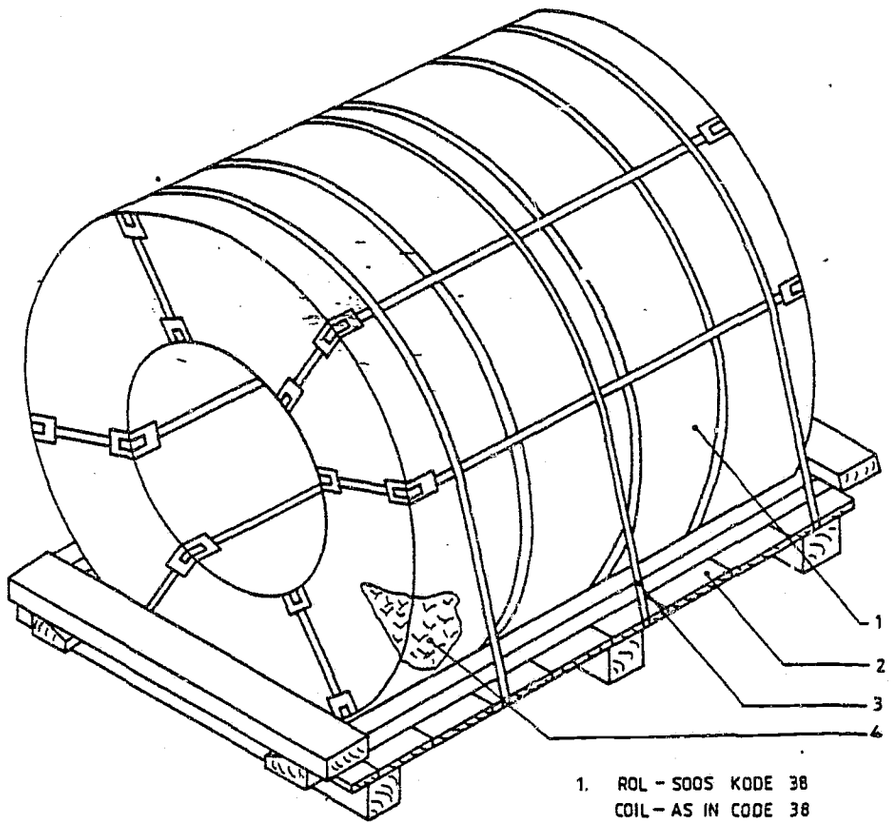
KODE / CODE 34

KLEURPLAATROLLE/COLOUR COATED COILS

Beskermde verpakking met papier horisontaal op laaibord.
Protective packing with paper horizontally on pallet.

NOTA / NOTE.

ALLEENLIK VIR PADVERVOER
FOR ROAD TRANSPORT ONLY.



1. ROL – SOOS KODE 38
   COIL – AS IN CODE 38
2. LAAIBORD
   PALLET
3. BAND
   STRAP
4. WATERWERENDE PAPIER
   WATER REPELLENT PAPER

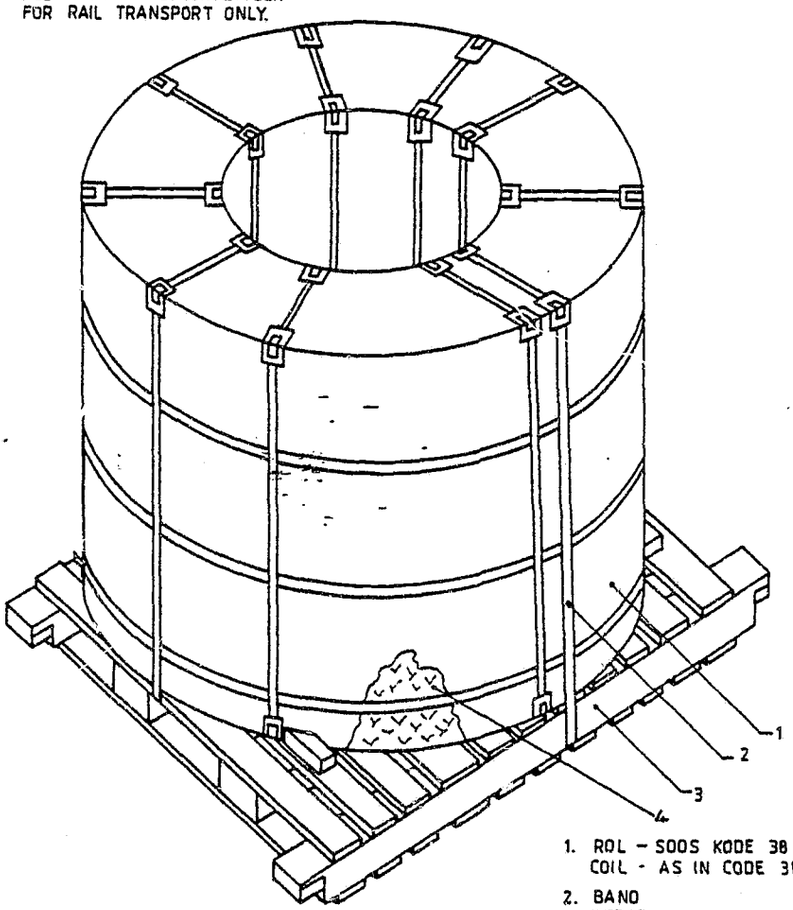
DECLASSIFIED

KODE / CODE 37

KLEURPLAATROLLE/COLOUR COATED COILS

Beskermde verpakking met papier vertikaal op laaibord.
Protective packing with paper vertical on pallet.

NOTA / NOTE:
ALLEENLIK VIR SPOORVERVOER
FOR RAIL TRANSPORT ONLY.



1. ROL – SOOS KODE 38
   COIL - AS IN CODE 38
2. BAND
   STRAP
3. LAAIBORD
   PALLET
4. WATERWERENDE PAPIER
   WATER REPELLENT PAPER

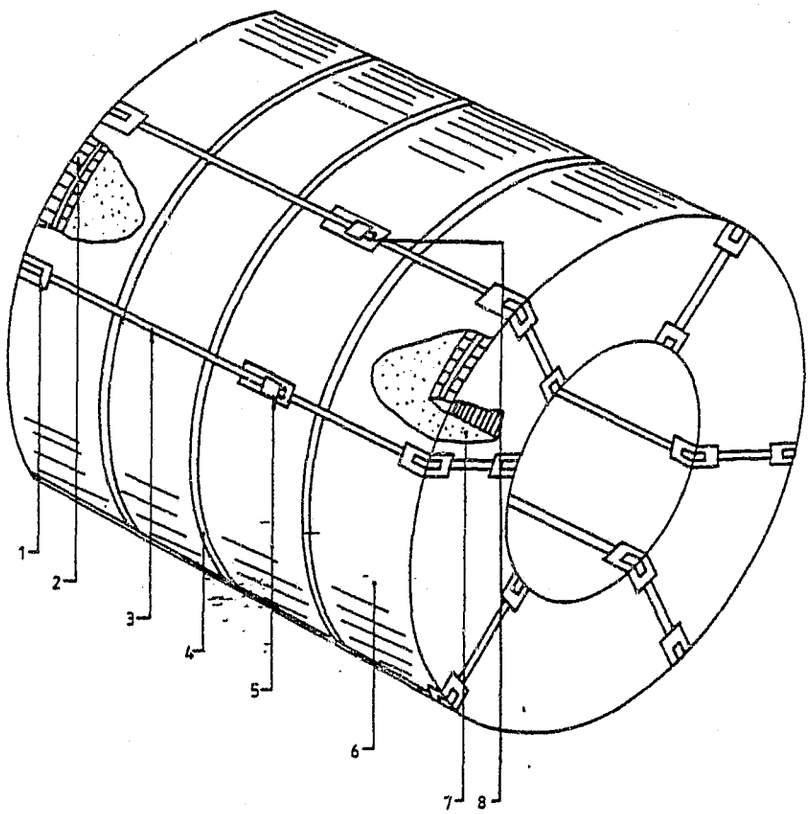
DECLASSIFIED

YSKOR BEPERK ISCOR LIMITED

KODE / CODE 38

KLEURPLAATROLLE/COLOUR COATED COILS

Beskermde verpakking met papier.
Protective packing with paper.



KODE / CODE 39
38-OP 'N WIEGDRAER OF DSD TROK (KP 4 & KP 5)
38-ON A CRADLE OR DSD TRUCK (KP 4 & KP 5)

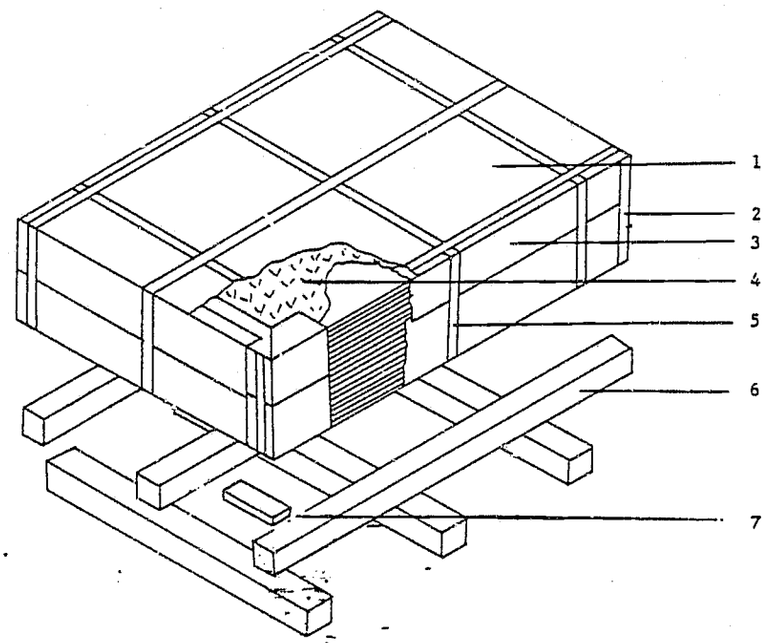
1. HOEKPLAAT
   ANGLE BRACKET
2. KANTDEKPLAAT
   SIDE COVER SHEET
3. OOGBANDE
   EYE TIES
4. OMTREKBANDE
   CIRCUMFERENTIAL STRAPS
5. SEËLS
   SEALS
6. DEKPLAAT
   COVER SHEET
7. WATERWERENDE PAPIER
   WATER REPELLENT PAPER
8. HOEKPLAAT
   ANGLE BRACKET

DECLASSIFIED

KODE/CODE 36

KLEURPLAAT STAPELS/COLOUR COATED BUNDLES

Beskermde verpakking met papier op lengte- en dwarsglyplanke.
Protective packing with paper on length and cross wise skids.



MATERIAAL-LENGTE (mm) MATERIAL LENGTH (mm)	AANTAL DWARSGLYPLANKE NO. OF CROSS SKIDS
600 < 1 500	2
1 500 < 2 400	3
2 400 < 3 000	4
3 000 < 3 600	5
3 600 < 4 200	6
4 200 < 4 800	7
4 800 ≤ 6 000	8

MATERIAAL-WYDTE (mm) MATERIAL WIDTH (mm)	AANTAL LENTEGLYPLANKE NO. LENGTH SKIDS
600 < 925	2
925 ≤ 1 600	3

1. DEKPLAAT/COVER SHEET
2. HOEKSTUT/CORNER BRACKET
3. HOEKPLAAT/ANGLE BRACKET
4. WATERWERENDE PAPIER/WATER REPELLENT PAPER
5. BAND/STRAP
6. GLYPLANK/SKID
7. STUTBLOKKIE/SUPPORTING BLOCK

* Lengte en dwarsglyplanke word aanmekaar gespyker en verstewig met stutblokkies voordat dit met bande aan stapel vasgebind word by vloerverpakking.

Length and crosswise skids are nailed together and reinforced with supporting blocks before being strapped to bundle when packed on floor.

DECLASSIFIED

B. BEKLEDINGSTELSELS / COATING SYSTEMS

1. VERFSTELSELS

Die volgende standaard verfstelsels is in die ondergenoemde kleure beskikbaar tensy anders uitdruklik gespesifiseer.

(a) VERFSTELSELS °

1. PAINT SYSTEMS

The following standard paint systems in the following colours are available unless otherwise specified.

(a) PAINT SYSTEMS °

VERFTIPE/PAINT TYPE	DROË VERF DIKTE DRY PAINT THICKNESS (MIKRON/MICRON)	KOMBINASIE BEPERKINGS/ COMBINATION RESTRICTIONS
Epoksie/Epoxy	5	Nie viniel/Not vinyl
Poliëster/Polyester	20	Geen/None
Standaard ruglaag/	(	Slegs Grys/
Standard backing coat	(15	Grey only
Viniel/Vinyl	18	Geen/None
Plastisol/Plastisol	180 - 200	Slegs/Only Grondlaag/Primer Plastisol/Plastisol
		of/Or Silikoon/Silicon Poliëster/Polyester

DRUKWERK KAN OP KLEURPLAAT GEDOEN WORD ONDERHEWIG AAN ONDERHANDELING.

PRINTING CAN BE DONE ON COLOUR COATED MATERIAL SUBJECT TO NEGOTIATION.

(b) STANDAARD VERFKLEURE

(b) STANDARD PAINT COLOURS

KODE/CODE	KLEUR/COLOUR	AANWENDING BEPERKINGS/ APPLICATION RESTRICTIONS
SABS 1091 D18	Aalwyngroen / Aloe Green	Geen / None
" F07	Asuurblou / Azure Blue	"
" B03	Buffelbruin / Buffalo Brown	"
" C59	Sandsteenbeige / Sandstone Beige	"
" G24	Duifgrys / Dove Grey	"
" C37	Vosbruin / Chestnut Brown	"
" G69	Kalkklipwit / Lime White	"
" A04	Okerrooi / Ochre Red	"
" E18	Brandergroen / Surf Green	"
-	Wit / White	Slegs toebehore Poliëster/ Appliance Poly ster only
-	Rypwit / Frost White	Geen / None
Plastisol/ Plastisol	Binnenshuis alle standaard kleure/ Internal all standard colours	Slegs grondlaag, plastisol of silikoon poliëster ruglaag/ Only primer, plastisol or silicon polyester backing coats
	* Buitenshuis slegs Kalkwit, Rypwit en Sandsteenbeige/ Exterior, only Lime white, Frost white and Sandstone Beige	Met slegs die volgende ruglae: Plastisol of Silikoon Poliëster/ With the following backing coats only Plastisol or Silicon Polyester

° Vir beskerming van voorafbedekte oppervlaktes kan dit met plastiek bedek word om beskadiging van verfoppervlakte te verhoed - op navraag

° For protection of coated area a plastic film may be specified to prevent damage of paint area - on application

* Ander standaard kleure - op navraag

* Other standard colours - op application

B. BEDEKKINGSTELSELS (vervolg)
COATING SYSTEMS (continued)

2. FOELIEBEDEKKINGS

2.1 Standaard foeliebedekkings is in die volgende afwerkings en wydtes beskikbaar.

(a) Poli-Viniel-Chloried samestellings (vir binnenshuise aanwending alleenlik).

2. FILM COATINGS

2.1 Standard film coatings are available in the following finishes and widths.

(a) Poly-Vynil-Chloride combinations (for interior use only).

AFWERKING/FINISH	KLEUR/COLOUR[1])	STANDAARDWYDTES ° STANDARD WIDTHS (mm)
Houtgrein / Woodgrain	Sapele	)
	Ligte Okkerneut / Light Walnut	)
	Eik/Oak	)
	Tambotie	)
	Rooshout/Rosewood	) 680
Linne/Linen	Bruin Tweed/Brown Tweed	) 750
	Grys Linne/Grey Linen	) 1225
Marmer/Marble	Perliet/Pearlite	)
	Sorbiet/Sorbite	)
	Bainiet/Bainite	)
Effe kleure/ Plain colours	Wit/White	)
	Wit/White (SAL)	)
	Swart/Black	)

° ANDER WYDTES: .....
Op aanvoek.
(1) Nie standaard kleure ..... op aansoek.

° OTHER WIDTHS ...
On application.
(1) Non standard colours ..... on application.

(b) KOMBINASIES VAN FOELIEBEDEKKING STELSELS°

(b) COMBINATIONS OF FILM COATED SYSTEMS°

BEDEKKINGSTIPE/ COATING TYPE	BOKANT/ TOPSIDE	RUGKANT/ BACKSIDE
P.V.C. Foelie/Film	PVC	Standaard ruglaag/Standard backing coat Deursigtige laag/Clear Coat Epoksie grondlaag/Epoxy primer

3. VERFGLANSREEKS:
Standaard 30% by 60°
Ander - op aanvoek.

3. PAINT GLOSS RANGE
Standard 30% at 60°
Other - on application.

UNCONTROLLED

CHROMADEK EN TEXTRADEK MET VERSINKTE SUBSTRAAT — CHROMADEK AND TEXTRADEK WITH GALVANISED SUBSTRATE

C. STANDAARDVERVAARDIGINGSPRAKTYK
STANDARD MANUFACTURING PRACTICE

1. OMVANG
SCOPE

Chromadek/Textradek met versinkte substraat bestaan uit daardie groep platprodukte (versinkte substraat) wat met 'n reeks verf en/of foelie bedek is.
Die versinkte substraat verwys na versinkte rolle en smalband, geinspekteer en platgerig met platgewalste gewone sinkblom. Die substraat is spesiaal geselekteer en chemies behandel om bedekte versinkte fynplaat en/of smalband met 'n hoë kwaliteit afwerking te voorsien.
Die beskikbare groottes is beperk tot die wat in die wydte, dikte en lengte tabelle voorkom.

Chromadek/Textradek with galvanised substrate comprise that group flat sheets (galvanised substrate) coated with a range of paints or P.V.C. films.
Galvanised substrate refer to galvanised coils and slit strip inspected and levelled with flat rolled regular spangle. The substrate is specially selected and chemically treated to ensure high quality finished galvanised sheets and/or slit strip.

The available sizes are limited to those shown in the width, thickness and length tables.

2. KWALITEIT
QUALITY

2.1 Handelskwaliteit
Wanneer Handelskwaliteit versinkte Smalband/Fynplaat bestel word, is die volgende analise en toetse, van toepassing.

2.2 Chemiese Analise
(Gietpotanalise)
Handelskwaliteit word gewoonlik vervaardig uit staal met 'n lae koolstofinhoud (0,15% maks.).

2.3 Buigtoetse (slegs op basismetaal)
Vir enige koolstofreeks wat nie die maksimum van 0,15% oorskry nie, behoort die toetsmonster by kamertemperatuur in enige rigting plat op sigself gebuig te kan word. Daar behoort geen geredelik sigbare krake op enige gebuigde oppervlak sigbaar te wees nie.

2.1 Commercial Quality
When Commercial Quality galvanised Slit Strip/Sheet is specified, the following analysis and tests are applicable.

2.2 Chemical Analysis
(Ladle Analysis)
Commercial Quality is normally supplied in a low carbon steel (0,15% max.).

2.3 Bend Tests (on base metal only)
For any carbon range, the maximum of which does not exceed 0,15%, a test specimen should stand being bent flat on itself in any direction at room temperature. There should be no readily visible cracks along any bend.

3. GROOTTEREEKS
RANGE OF SIZES

	FYNPLAAT /SHEETS				SMALBAND SLIT STRIP
	WYDTE/WIDTH	LENGTE/LENGTH			
STANDAARD-DIKTES NA VERSINKING/ STANDARD THICKNESS AFTER COATING	ROLLE EN GESNYDE LENGTES/ COILS AND CUT LENGTHS	HANDELS- EN SLUITVOEGKWALITEIT/COMMERCIAL AND LOCKFORMING QUALITY	TREK-KWALITEITE DRAWING QUALITIES	ALLE KWALITEITE ALL QUALITIES	WYDTE WIDTH
		WYDTES / WIDTHS			
		< 800 mm	< 800 mm	≥ 800mm	
mm	mm	m	m	m	mm
2,00	600 tot 1225	1,0 tot/to 5,0	1,0 tot/to 5,0	1,0 tot/to 5,0	150 tot/to < 600
1,60 1,20 1,00 0,80	600 tot/to 1600				
0,60	600 tot/to 1400				
0,50	600 tot/to 1225	1,0 tot/to 4,5	1,0 tot/to 4,5	1,0 tot/to 4,5	
0,40	600 tot/to 1000	1,0 tot/to 2,5	1,0 tot/to 2,5	1,0 tot/to 2,5	150 tot/to < 400

BINNE DIAMETER/INSIDE DIAMETER

KODE/CODE	DIA. BINNE/DIA. INSIDE (mm)
2591	510

CHROMADEK EN TEXTRADEK MET VERSINKTE SUBSTRAAT

Versinkte Smalband/Fynplaat word geproduseer in millimeterdiktes. Die dikte verwys na diktes van die materiaal na versinking.

Normale digtheid van staal is:
1 vk meter fynplaat 1 mm dik = 7,85 kg.
Versinkte fynplaat/Smalband word op 'n grondslag van massa verkoop. Om massa in dikte om te sit, met inagneming van kroon en oortoleransie by wydte en lengte is die volgende formule van toepassing:
1 vk meter fynplaat, 1 mm dik = 8,039 kg.

4.1 Massatoleransie - Gesnyde lengtes alleenlik

Die toelaatbare afwyking van die berekende massa geneem van alle plate van een grootte en een dikte na een bestemming (maar nie individuele fynplate nie) moet die volgende persentasie bo of onder die berekende massa wees:-

CHROMADEK AND TEXTRADEK WITH GALVANISED SUBSTRATE

TOLERANCES

Galvanised Slit Strip/Sheet is produced to millimetre thicknesses. The thickness refers to the thickness of the material after galvanising.
Normal density of steel is:
1 sq. metre of sheet 1 mm thick = 7,85 kg.
Galvanised Sheet/Strip is sold on a mass basis. To convert mass to thickness taking into account crown and over tolerance on width and length the following formula applies:
1 sq. metre of sheet, 1 mm thick = 8,039

4.1 Mass tolerance - Cut lengths only

The permissible variation from calculated mass taken over all sheets of one size and one thickness to one destination (but not individual sheets) shall be the following percentage above or below the calculated mass:-

BEREKENDE MASSA - TON CALCULATED MASS - TONS	TOELAATBARE AFWYKING VAN BEREKENDE MASSA PERMISSIBLE VARIATION FROM CALCULATED MASS			
	UNDER/ONDER		OOR/OVER	
	G185/G275	G425	G185/G275	G425
≤ 5	10,0	12	10	20
5 - ≤ 20	7,0	8,5	7,0	14
≥ 20	3,5	4,5	3,5	7

4.2 Dikte Toleransies
4.2.1 ROLLE, SMALBAND EN GESNYDE LENGTES

4.2 Thickness Tolerances
4.2.1 COILS, SLIT STRIP AND CUT LENGTHS

SINK DEKLAAG-AANDUIDING/ GALVINISING COATING DESIGNATION	DIKTE / THICKNESS (mm)							
	> 1,4 - 2,0		1,0 - ≤ 1,4		0,5 - ≤ 1,0		0,3 - < 0,5	
	DIKTETOLERANSIE (mm) THICKNESS TOLERANCE (mm)							
	ONDER(-) UNDER(-)	OOR(+) OVER(+)	ONDER(-) UNDER(-)	OOR(+) OVER(+)	ONDER(-) UNDER(-)	OOR(+) OVER(+)	ONDER(-) UNDER(-)	OOR(+) OVER(+)
G185	0,14	0,14	0,11	0,11	0,09	0,09	0,06	0,06
G275	0,14	0,14	0,11	0,11	0,09	0,09	0,06	0,06
G425	0,17	0,29	0,14	0,26	0,12	0,24		

OPMERKING
Vir enige gespesifiseerde deklaag kan die nominale basismetaaldikte verkry word deur 0,04 mm van die bestelde dikte. na versinking, af te trek.

NOTE
For any specified coating the nominal base metal thickness may be obtained by deducting 0,04 mm from the ordered coated thickness.

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4. TOLERANSIES (vervolg) / TOLERANCES (continued)

4.3 Wydtetoleransie (Smalband 150 - < 600 mm) — 4.3 Width Tolerance (Slit Strip 150 -<600 mm)

DIKTE NA VERSINKING / THICKNESS AFTER GALVANISING (mm)	WYDTES / WIDTHS (mm)		
	150 - < 300	300 - < 450	450 - < 600
	AFWYKINGS OOR (+) EN ONDER (-) / VARIATIONS OVER (+) AND UNDER (-)		
0,4 - 2,0	0,30	0,70	1.00

4.4 Wydte- en Lengtetoleransies (Fynplaat Rolle ⩾600 mm) (Nie haaksny nie) — 4.4 Width and Length Tolerances (Sheets/ Coils ⩾600 mm) (Not resquared)

WYDTE / WIDTH		LENGTE / LENGTH	
GESPESIFISEERDE WYDTE/ SPECIFIED WIDTH (mm)	TOLERANSIE BO GESPESIFISEERDE WYDTE/ TOLERANCE OVER SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE/ SPECIFIED LENGTH (mm)	TOLERANSIE BO GESPESIFISEERDE LENGTE/ TOLERANCE OVER SPECIFIED LENGTH (mm)
600 - 750	3	⩽ 1 525	6
> 750 - 1 225	5	>1 525 - 2 450	13
>1 225 - 1 525	6	>2 450 - 3 050	19
>1 525 - 1 600	8	>3 050 - 4 000	25
		>4 000 - 4 900	31
		>4 900 - 5 000	38

OPMERKING: WYDTE- EN LENGTETOLERANSIE NIKS ONDER NIE — NOTE: WIDTH AND LENGTH TOLERANCE NOTHING UNDER

4.5 Krommingtoleransies
Kromming is die grootste afwyking tussen 'n sykant en 'n reguit lyn, gemeet deur middel van 'n rei aan die uitholkant.

4.5.1 Rolle (⩾600 mm wyd) 25 mm in enige 6000 mm.

4.5.2 Smalband
(< 300 - < 600 mm wyd) 25 mm in enige 6000 mm.
(< 300 mm wyd) 6 mm in enige 2500 mm

4.5.3 Gesnyde Lengtes (Nie haaksgesny nie)
0,4% X lengte.

4.5 Camber Tolerances
Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straight edge.

4.5.1 Coils (⩾ 600 mm wide) 25 mm in any 6000 mm.

4.5.2 Slit Strip
(< 300 - < 600 mm wide) 25 mm in any 6000 mm.
(< 300 mm wide) 6 mm in any 2500 mm.

4.5.3 Cut Lengths (Not resquared)
0,4% X length.

4.6 Nie-haaks-toleransies (Nie haaksgesny nie) Gesnyde lengtes
Nie-haaks is die grootste afwyking van 'n kant van 'n reguit lyn reghoekig met 'n sy en rakende die een hoek. Die toleransie by versinkte fynplaat van alle diktes en alle groottes is 1,0% van die wydte.

4.6 Out-of-Square Tolerances (Not resquared) Cut lengths
Out-of-Square is the greatest deviation or an edge from a straight line at right angles to a side and touching one corner. The tolerance for galvanised sheets of all thicknesses and all sizes is 1,0% of the width.

4.7 Platheidstoleransies (Gesnyde lengtes) — 4.7 Flatness Tolerances (Cut lengths)

DIE MAKSIMUM AFWYKING VAN 'N PLAT OPPERVLAK/THE MAXIMUM DEVIATION FROM A FLAT SURFACE			
GESPESIFISEERDE DIKTE/ SPECIFIED THICKNESS (mm)	GESPESIFISEERDE WYDTE/ SPECIFIED WIDTH (mm)	GESPESIFISEERDE LENGTE/ SPECIFIED LENGTH (mm)	PLATHEIDSTOLERANSIE*/ FLATNESS TOLERANCE* (mm)
⩾0,70	⩽ 1 225	⩽ 3 000	3
	> 1 225	> 3 000	6
< 0,70	⩽ 900	⩽ 3 000	6
	> 900	> 3 000	10

* In die geval van volharde materiaal word hierdie toleransies verdubbel.

* In the case of full hard material these tolerances must be doubled.

4.8 Kantsny
Voorsiening moet in die bestelde wydte gemaak word vir addisionele kantsny om voorsiening te maak vir kantsny na foelie-bedekking.

4.8 Side trimming
Allowance must be made in the ordered width for additional side trimming to compensate for side trimming after film coating.

5. ALGEMEEN
GENERAL

5.1 Oormaat of Ondermaat

Vir elke item van 'n bestelling behou ons ons die reg voor om materiaal te voorsien binne die toleransie soos hieronder aangedui:

MASSA VAN BESTELDE ITEM (TON)/ MASS OF ORDERED ITEM (TONS)	OORMAAT (+) ONDERMAAT (-)/ OVERAGE (+) UNDERAGE (-)	
	TON(S)	
5 -< 10	1	1
10 -< 20	2	2
20 -< 40	2,5	2,5
40 -<100	5	5
⩾100	10	10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransies wees.

5.1 Overage or Underage

For each item on an order we reserve the right to supply within the tolerances given below:

Where a minimum or maximum quantity is specified the overage or underage will be the total of the applicable plus and minus tolerances.

5.2.1 Saambind in Bondels

(a) Gesnyde Lengtes

Kleurplaat word verpak in bondels met beskermende verpakking (insluitende hoeksteenstukke en dekplaat)met waterdigte papier op oorlangse glyplanke (Verwys skets op bladsy P6).

(i) Vir wydtes ⩽1225 mm
Ongeveer 1,25 ton
Ongeveer 2,5 ton
Ongeveer 4 ton
Ongeveer 5 ton

(ii) Vir wydtes >1225 mm
Ongeveer 5 ton
Die klant se naam en versendingsadres word op die boonste plaat van elke saamgestelde bondel aangebring. Wanneer bondelgroottes van 1,25 en 2,5 ton bestel word vir versending na 'n klant, behou ons ons die reg voor om 'n aantal kleiner bondels saam te bind in een gesamentlike bondel van ongeveer 5,00 ton. In sulke gevalle word die klant se naam en versendingsadres slegs op die boonste bondel aangebring, terwyl die kleiner bondels so gemerk word dat dit maklik met die boonste bondel vereenselwig kan word. Klante moet op die bestelling aandui indien hulle enige probleme ondervind met hierdie saamgestelde bondels.

(b) Rolle

Kleurplaat in rolle word toegedraai in waterdigte papier en afvalplate wat omgebuig word. (Verwys skets op bladsy P6).

Rolle word in groepe saam geweeg, en die gemiddelde massa bepaal deur die getal, is nie noodwendig die werklike massa van elke afsonderlike rol nie.

5.2.1 Bundling

(a) Cut Lengths

Colour coated sheets are protectively packed in bundles (including corner brackets and cover sheet) with waterproof paper on lengthwise skids (Refer drawing on page P6).

(i) For widths ⩽1225 mm
Approximately 1,25 ton
Approximately 2,5 tons
Approximately 4 tons
Approximately 5 tons

(ii) For widths >1225 mm
Approximately 5 tons
The customer's name and consignment address are indicated on the top sheet of each composite bundle. When bundle sizes of approximately 1,25 and 2,50 tons are ordered for dispatch to one customer, we reserve the right of making up composite bundles up to approximately 5,00 tons by strapping together a number of the smaller bundles. In such cases the customer's name and consignment address are indicated on the top bundle only and each of the smaller bundles is marked so as to associate it with the top bundle. Customers should indicate on the order if any difficulties are experienced with composite bundels.

(b) Coils

Colour/coated sheets in coils are wrapped in waterproof paper and waster sheets bend over. (Refer drawing on page 6).

Coils are weighed in groups, and the mass of the group averaged over the number of coils. This average mass is not intended to be the actual mass of any individual coil.

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5. ALGEMEEN (VERVOLG)/GENERAL (CONTINUED)

5.2 Saambind in bondels (Vervolg)

(c) Smalband in Rolle

(i) Enkelrolle of bondels-rolle kan vir vervoerdoeleindes met staalband saamgebind word in saamgestelde bondels-rolle. Die staalbande wat sulke saamgestelde bondels bind, kan deur die geadresseerde vir aflaaidoeleindes gesny word.

(ii) Bondels-rolle word geweeg, en uit die getal rolle per bondel word 'n gemiddelde massa per rol bepaal. Die gemiddelde massa is nie noodwendig die werklike massa van enige rol nie.

5.2.2 MERKING

(a) Gesnyde Lengtes (<4,5mm dik)
Die boonste plaat van elke bondel word gemerk met die graad- of kwaliteitsimbool, dikte, lengte, wydte, en benaderde getal plate in die bondel.

(b) Rolle
Die deklaag, kwaliteit, wydte en dikte word op elke rol, aangebring.

(c) Smalband
Elke bondel rolle word gemerk met die kwaliteit, wydte en dikte.
Opmerking: Wanneer 'n analisesertifikaat of 'n analise- en toetssertifikaat vereis word, sal die "gietnommer" op die bondel/rol aangetoon word.

5.3 Massa van Rolle

Bestellings vir rolle met 'n gespesifiseerde presiese massa word nie aanvaar nie. Rolle kan bestel word tot 'n gespesifiseerde maksimum massa volgens bladsye P4. Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word sal versending van die bestelling soos volg geskied:

(a) Minstens 80% in volmassarolle.
(b) Hoogstens 20% in ligmassarolle.

'Volmassarolle'
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, word rolle met 'n massa van minstens 65% van daardie maksimum massa gelewer.

'Ligmassarolle'
Wanneer rolle volgens 'n gespesifiseerde maksimum massa bestel word, is 'ligmassarolle', rolle met 'n massa van minder as 'volmassarolle' maar met minstens 25% van die maksimum massa, hetsy gespesifiseer of omgereken.

5.4 Produkinligting

Versinkte Fynplaat/Smalband word volgens A.S.T.M.-, BS- en ander spesifikasies geproduseer.
Tensy anders ooreengekom, word ander kwaliteite as Handelskwaliteit in ooreenstemming met die vereistes van die betrokke spesifikasie voorsien.

5.5 Inspeksie

Rolle
Die inspeksie van rolle verskaf nie dieselfde geleentheid om defekte af te keur soos in die geval van gesnyde lengtes nie. Defekte gedeeltes sal tot 'n minimum beperk word en die gemiddelde ongesorteerde opbrengs sal nie minder as 97,5% op elke afsonderlike bestelling wees nie.
'n Ongesorteerde opbrengs van 95% per individuele rol word gewaarborg en indien dit nie verkry word nie, moet die oorblywende gedeelte van sodanige rol sowel as die materiaal gesny van die rol apart gehou word, wat as 'n afsonderlike eis hanteer sal word.

5.6 Seile

Die materiaal versend deur die Werke sal deur seile bedek wees tydens vervoer.

5.2 Bundling (Continued)

(c) Slit Strip in Coils

(i) Individual or bundles of coils may be strapped together to form composite bundles of coils for transporting purposes. Bands securing such composite coils can be cut by consignees for off-loading purposes.

(ii) Coils are weighed in bundles and the mass averaged over the number of coils in the bundle. This average mass is not intended to be the actual mass of any individual coil.

5.2.2 MARKING

(a) Cut Lengths (<4,5mm thick)
The top sheet of each bundle will be marked to indicate grade or quality symbol, thickness, length, width and approximate number of sheets.

(b) Coils
Each coil is marked with the coating, quality, width and thickness.

(c) Slit Strip
Each bundle of coils is marked with the quality, width and thickness.
Note: When an analysis certificate or analysis and test certificate is required, the "Cast number" will be indicated on the bundle/coil.

5.3 Mass of Coils

Orders for coils to a specific exact mass are not accepted. Coils may be ordered with a specific maximum mass in accordance with pages P4.
When coils are ordered to a specified maximum mass, the order is despatched as follows:

(a) Not less than 80% in full mass coils.
(b) Not more than 20% in light mass coils.

'Full Mass Coils'
When coils to specified maximum mass are ordered, then coils are supplied with a mass of not less than 65% of that maximum mass.

'Light Mass Coils'
When coils are ordered to a specified maximum mass, then 'Light Mass Coils' are coils with a mass of less than 'Full Mass Coils' but not less than 25% of the maximum mass specified or converted.

5.4 Product Information

Galvanised Sheets/Slit Strip are produced to A.S.T.M.-, BS- and other specifications.
Unless otherwise agreed upon, qualities other than Commercial quality are supplied in accordance with the requirements of the relevant specification.

5.5 Inspection

Coils
Inspection of coils does not afford the same opportunity to reject defects as in the case of cut lengths. Defective portions will be kept to a minimum and the average unassorted yield will not be less than 97,5% on each separate order.
An unassorted yield of 95% per individual coil is guaranteed and if this is not obtained the remainder of such coil and the material cut from such coil should be kept separately and will be treated as a separate claim.

5.6 Tarpaulins

All material dispatched by the Works will be covered by tarpaulins during transit.

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S.P.E. 146

YSKOR BEPERK ISCOR LIMITED

CHROMADEK SUPRASPAN PROFIELFYNPLAAT

CHROMADEK SUPRASPAN PROFILE SHEETS

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CHROMADEK SUPRASPAN PROFIELFYNPLAAT

VOORWOORD

CHROMADEK SUPRASPAN PROFILE SHEETS

PREFACE

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½% mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.

3. Tensy anders bestel, is alle items onderworpe aan 'n 'oormaat' of 'ondermaat' verwys bladsye P3, par. 6 en S3, par. 4.6

4. Chromadek supraspan profielfynplaat word verkoop teen 'n prys per metrieke ton (1 000 kilogram) volgens bruto massa soos geregistreer deur die massameter/massameterbrug by die Werke. Enige verwysing na die getal plate op die faktuur, vragbrief of bondel is benaderd en slegs vir inligting.

5. Ekstras en aftrekkings hierin gekwoteer is per metrieke ton, tensy anders vermeld. Elke ekstra of aftrekking is afsonderlik en uitdruklik.

6. Normale toetsing en inspeksie, soos in die toepaslike spesifikasies uiteengesit, word uitgevoer.

7. Pryse en ekstras is die wat op die versendingsdatum geld, en is onderworpe aan veranderigs sonder kennisgewing.

8. Wanneer fynplate bestel word, moet klante altyd die eindgebruik spesifiseer.

9. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.

10. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.

11. Alvorens klante materiaal verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan 'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½% provided payment is made in accordance with our General Conditions of Sale.

3. Unless ordered to the contrary, all items are subject to 'overage' or 'underage' - refer pages P3, par. 6 and S3, par. 4.6.

4. Chromadek supraspan profile sheets are sold at a price per metric ton (1 000 kilogram) on gross mass as recorded on the assized mass meter/mass meter bridge. at the Works. Any reference to the number of sheets on the invoice or consignment note or bundle is approximate and for information only.

5. Extras and deductions quoted herein are per metric ton unless otherwise stated. Each extra or deduction is separate and distinct.

6. Normal testing and inspection as outlined in the relevant specifications are carried out.

7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.

8. When ordering sheets customers should always state the end use.

9. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever, except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.

10. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.

11. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD

A.	PRYSE	BLADSY
1.	Basisprys	P1
2.	Hoeveelheidsekstras/aftrekkings	P1
3.	Grootte-ekstras	P1
4.	Deklaagekstras	P2
5.	Kwaliteitsekstras	P3
6.	Oormaat/Ondermaat Ekstras	P3
7.	Verpakkingsekstras	P3
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3.	Size Extras	P1
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6.	Overage/Underage Extras	P3
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A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN

(a) Bestemming
  (i) Posadres
  (ii) Afleweringsadres

(b) Aflewering verlang
  (i) Datum
  (ii) Spoorvervoer
  (iii) Padvervoer

2. PRODUK:

(a) Hoeveelheid (Totale massa van elke item)
(b) Afmetings
  (i) Dikte
  (ii) Wydte
  (iii) Lengte
(c) Kwaliteit
(d) Inspeksie verlang - spesifiseer
(e) Sertifisering - tipe sertifikate
(f) Verpakking - spesifiseer
(g) Oppervlak afwerking
(h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Dikte en Profiel
4. Lengte
5. Versinkdeklaagekstras
6. Kwaliteitsekstras
7. Beperking op oor-/ondermaat
8. Verpakking en merking
9. Bedekkingsekstras
10. Invoerheffing (R10,25/Ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL

(a) Destination
  (i) Postal address
  (ii) Consignment address

(b) Delivery required
  (i) Date
  (ii) Rail Transport
  (iii) Road Transport

2. PRODUCT:

(a) Quantity (Total mass of each item)
(b) Dimensions
  (i) Thickness
  (ii) Width
  (iii) Length
(c) Quality
(d) Inspection - specify
(e) Certification - type of certificates
(f) Packing - specify
(g) Surface finish
(h) End uses

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Thickness and Profile
4. Length
5. Galvanising extras
6. Quality extras
7. Restriction on over-/underage
8. Packing and marking
9. Coating extras
10. Import Levy (R10,25/Ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

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CHROMADEK SUPRASPAN PROFIELSYNPLAAT / CHROMADEK SUPRASPAN PROFILE SHEETS

A. PRYSE/PRICES

1. BASISPRYS: (Gebaseer op Handelskwaliteit versinkte substraat)

Delta Rib & S. Rib..... R649-50

** Verwys (a) en (b)

(a) PWV[1]) -gebied: Basisprys per 1 000 kg v.o.s. Yskorwerke, Vanderbijlpark, (Sylyn 1414, Bijlkor) plus padvervoer/spoorvrag.

(b) Buite PWV[1]) - gebied: Basisprys per 1 000 kg v.o.s. Germiston plus spoorvrag.

[1]) Verwys Kontrolelys par. C.

1. BASIS PRICE: (Based on Commercial Quality galvanised substrate).

** Refer (a) and (b)

(a) PWV[1]) area: Basis price per 1 000 kg f.o.r. Iscor Works, Vanderbijlpark, (Siding 1414, Bijlkor) plus cartage/railage.

(b) Outside PWV[1]) area: Basis price per 1 000 kg f.o.r. Germiston plus railage.

[1]) Refer Check List par. C.

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS - QUANTITY EXTRAS/DEDUCTIONS

2.1 ITEMEKSTRAS/AFTREKKINGS

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die Korporasie uitgereik t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.1 ITEM EXTRAS/DEDUCTIONS

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

ITEM	EKSTRA/EXTRA	AFTREKKING/DEDUCTION
TON/TONS	R.c./TON	R.c./TON
2 - < 5	65-90	
5 - < 10	41-20	
10 - < 20	10-95	
20 - < 40	5-50	
40 - < 100	0-00	0-00
100 - < 200		5-50
200 - < 300		10-95
⩾ 300		16-45

3. GROOTTE-EKSTRAS/SIZE EXTRAS

3.1 DIKTE- EN PROFIELEKSTRAS

3.1 THICKNESS AND PROFILE EXTRAS

STANDAARD-DIKTE (mm) NA VERSINKING/ STANDARD THICKNESS (mm) AFTER COATING	S-RIB PROFIEL/PROFILE		DELTA-RIB
	8,5/76	10,5/76	
	R.c.	R.c.	R.c.
1,6	-	-	10-45
1,2	13-65	8-90	8-80
1,0	12-10	7-00	6-90
0,8	8-30	4-35	6-05
0,6	1-60	0-00	11-25
0,5	13-45*	7-45*	11-70*

*Volhard alleenlik

* Full hard only

YSKOR BEPERK ISCOR LIMITED

CHROMADEK SUPRASPAN PROFIELFYNPLAAT (VERVOLG) CHROMADEK SUPRASPAN PROFILE SHEETS (CONTINUED)

3.2 STANDAARDLENGTE-EKSTRA

3.2 STANDARD LENGTH EXTRA

PROFIEL/ PROFILE	STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	STANDAARDLENGTES (IN TRAPPE VAN 100 mm)/ STANDARD LENGTHS (IN INCREMENTS OF 100 mm)	EKSTRA/ EXTRA
S-RIB	(mm)	(m)	R.c.
8,5/76	0,5 - 1,2	3,3 - 15,0	0-00
10,5/76	0,5 - 1,2	3,3 - 15,0	
DELTA-RIB	0,5 - 1,6	3,3 - 15,0	0-00

Nota: - Lengtes nie in bostaande tabel gemoem nie, mag voorsien word onderworpe aan onderhandeling.

Note: - Lengths not included in the abovementioned table may be supplied subject to special arrangement

4. DEKLAAGEKSTRAS/COATING EXTRAS

Chromadek Supraspan profiel fynplaat is beskikbaar met sinkdeklae van verskillende massa per vierkante meter waarop die volgende ekstras van toepassing is.

Chromadek Supraspan profile sheet is available with zinc coatings of different mass per square meter for which the following extras apply.

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	DEKLAAGAANDUIDING/ COATING DESIGNATION	
	G.275 (2069)	G.425 (2135)
	(R.c.)	(R.c)
1,6	33-85	49-60
1,2	44-60	65-35
1,0	53-90	78-90
0,8	66-10	96-60
0,6	89-20	129-05
0,5	105-95	152-10

1982-01-01

Kanselleer en vervang uitgawe gedateer
Cancels and supesedes issue dated

1981-10-01

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5. KWALITEITSEKSTRAS / QUALITY EXTRAS

KODE/ CODE	BESKRYWING/DESCRIPTION	EKSTRA/ EXTRA
123	Handelskwaliteit Koolstof 0,15% maksimum/ Commercial Quality Carbon 0,15% maximum	R.c. 0-00
123 2106	Handelskwaliteit in Volhard toestand (⩾ 80RB)/ Commercial Quality in Full Hard Condition (⩾ 80RB) Beperkings/Limitations (a) Dikte/Thickness 0,5 mm alleenlik/only 0,6 - 1,00 mm - op aansoek/on application	15-00
	Ander Kwaliteite - op aansoek/Other Qualities - on application	

6. BEPERKING OP OOR- OF ONDERMAAT TOELATING (Verwys bladsy S3, Par. 4.6)/ LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE (Refer page S3, par. 4.6)

(i) 50% van standaard oor- of ondermaat toelating (2408)..... R8-80
(ii)(a)*Vir gespesifiseerde minimum hoeveelhede (2440) R3-50
(b)*Vir gespesifiseerde maksimum hoeveelhede (2293)..... R3-50
*(Uitsluitende ekstras vir beperkings op oor-/of ondermaat)
(iii) Vir gespesifiseerde presiese aantal plate (2170).....R14-70

(i) 50% limitation on standard overage or underage (2408)..... R8-80
(ii)(a)*For specified minimum quantities (2440)..... R3-50
(b)*For specified maximum quantities (2293)..... R3-50
*(Excluding extras for restrictions on overage or underage).
(iii) For specified exact number of sheets (2170)..... R14-70

7. VERPAKKINGS-EKSTRAS/ PACKING EXTRAS

7.1 STANDAARDVERPAKKING
7.1.1 Bondelgrootte
(i) Delta-Rib -
5 Ton (Kode 01) Alle lengtes soos per Bladsy P2 Par. 3.2 ..... R 0-00

(ii) S-Rib -
5 Ton (Kode 01) Alle lengtes soos per Bladsy P2 Par 3.2 ..... R 0-00

7.1 STANDARD PACKING
7.1.1 Bundle Size
(i) Delta-Rib -
5 Tons (Code 01) All lengths as per Page P2 Par. 3.2 ..... R0-00

(ii) S-Rib -
5 Tons (Code 01) All lengths as per Page P2 par. 3.2 ..... R0-00

YSKOR BEPERK ISCOR LIMITED

CHROMADEK SUPRASPAN PROFIELPLAAT (VERVOLG) CHROMADEK SUPRASPAN PROFILE SHEET (CONTINUED)

8. SPESIALE VERWERKINGSEKSTRAS / SPECIAL PROCESSING EXTRAS

8.1 Weeg van afsonderlike bondels/rolle en die aanbring van die aangetekende massa op elke bondel/rol..... R2-05

8.1 Weighing of individual bundles/coils and marking the recorded mass on each bundle/coil..... R2-05

9. BEDEKKINGSEKSTRAS / COATING EXTRAS

Pryse per ton vir een kant bedek insluitende epoksiegrondlaag, waar van toepassing.

Prices per ton for one side coated including epoxy primer where necessary.

9.1 VERF EKSTRAS

9.1 PAINT EXTRAS

DIKTE NA VERSINKING/ THICKNESS AFTER GALVANISING (mm)	VERFTIPE/PAINT TYPE				
	VOLLAAG/FULL COAT			HALFLAAG / HALFCOAT	GRONDLAAG / PRIMER
	SILIKOON POLIëSTER[1]) SILICON POLYESTER[1]) R/TON	POLIëSTER* POLYESTER R/TON	PLASTISOL/ PLASTISOL R/TON	STANDAARDRUGLAAG* STANDARD BACKING COAT R/TON	EPOKSIE* EPOXY R/TON
1,6	41-30	29-95	98-00	21-05	6-50
1,2	55-10	39-95	130-70	28-10	8-65
1,0	66-80	48-45	158-50	34-05	10-50
0,8	83-65	60-70	198-45	42-65	13-10
0,6	114-25	82-90	271-05	58-25	17-90
0,5	139-25	101-00	330-35	70-80	21-85
0,4	170-85	123-95	405-35	87-10	26-80

1) Selikoon Poliëster: Normaalweg aan bokant van plaat.

* Slegs aan die rugkant van plaat.

1) Silicon Polyester: Normally on top side of sheet.

* On backing side of material only.

1982-01-01 Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated 1981-07-03

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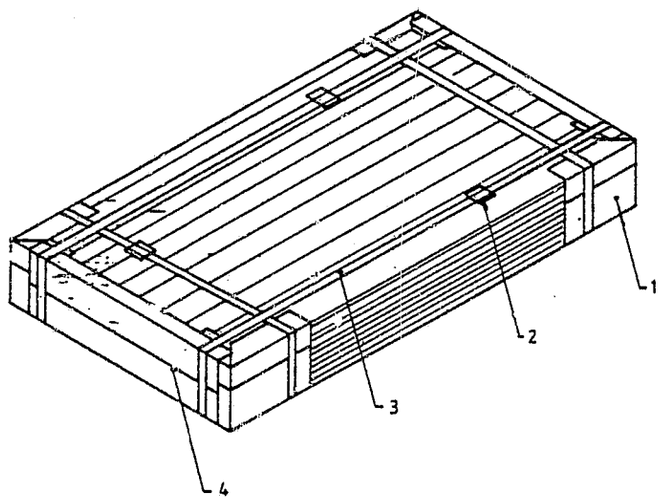
KODE / CODE 00

PROFIELPLAAT/PROFILE SHEETS

Onbeskermde verpakking sonder papier
Unprotective packing without paper



1 HOEKSTUT
CORNER BRACKET

2. SEËL
SEAL

3. BAND
STRAP

4. HOEKPLAAT
ANGLE BRACKET

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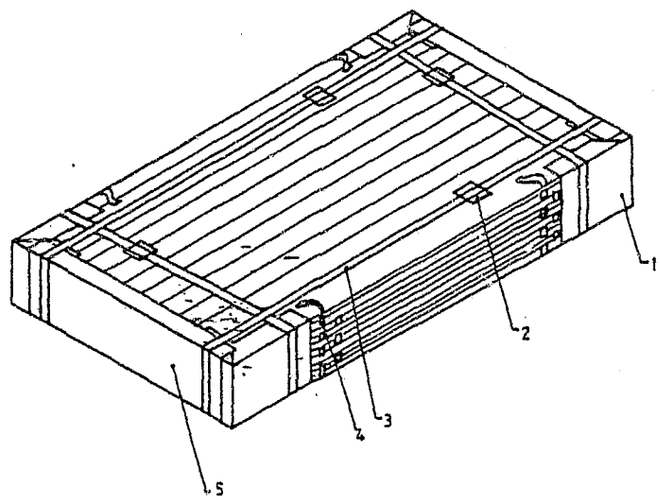
YSKOR BEPERK / ISCOR LIMITED

03/12/2019

KODE / CODE 00

PROFIELPLAATHANDBONDELS/PROFILE SHEET HAND BUNDLES

Onbeskermde verpakking sonder papier.
Unprotective packing without paper.



1. HOEKSTUT
   CORNER BRACKET.
2. SEËL
   SEAL
3. BAND
   STRAP
4. PROFIEL BAND
   PROFILE STRAP
5. HOEKPLAAT
   ANGLE BRACKET.

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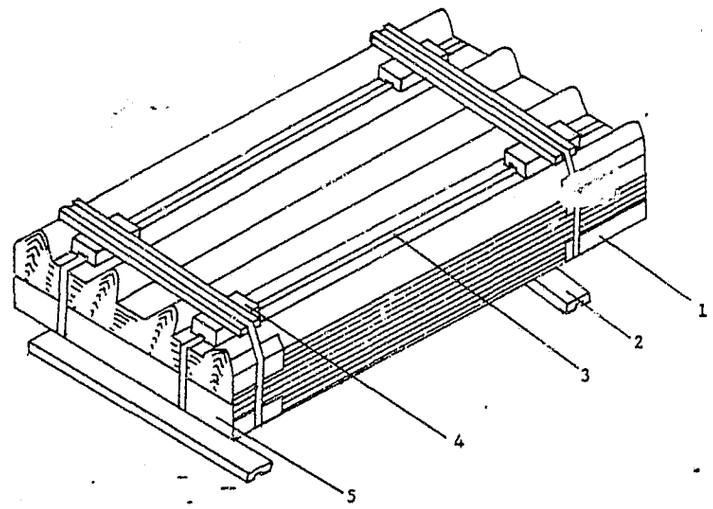
DECLASSIFIED

KODE/CODE 03

DELTA RIB

Onbeskermde verpakking sonder papier op dwarsglyplanke.
Unprotective packing without paper on cross wise skids.



MATERIAAL LENGTE (m) MATERIAL LENGTH (m)	AANTAL DWARS GLYPLANKE NO. OF CROSS SKIDS
0,6 < 5,0	2
5,0 < 10,0	3
10,0 ≤ 15,0	4

* Glyplanke word met bande aan stapel vasgebind.
Skids are strapped to bundle.

1. HOEKSTUT
   CORNER BRACKET
2. DWARSGLYPLANK
   CROSS WISE SKID
3. BAND
   STRAP
4. STUTBLOK
   SUPPORTING BLOCK
5. HOEKPLAAT
   ANGLE BRACKET

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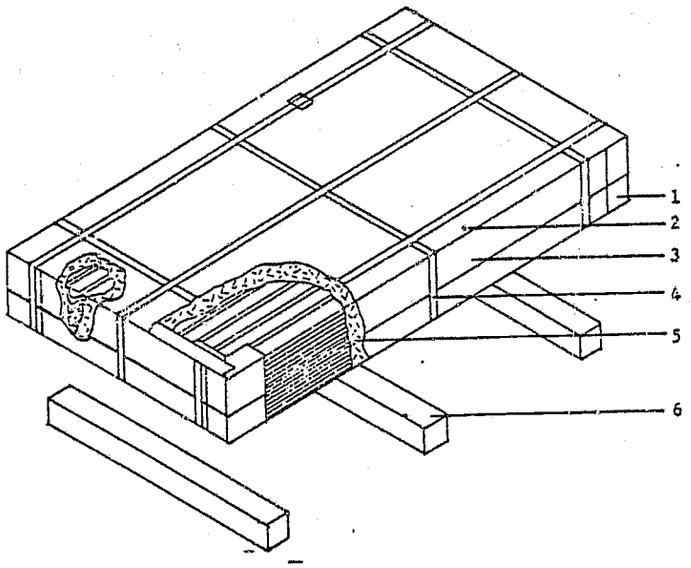
KODE/CODE 33

PROFIELPLAATSTAPELS/PROFILE BUNDLES

Kermde verpakking met papier op dwarsglyplanke
Protective packing with paper on cross wise skids.



MATERIAAL LENGTE (mm) MATERIAL LENGTH (mm)	AANTAL DWARS-GLYPLANKE NO. OF CROSS SKIDS
0,6 < 5,0	2
5,0 < 10,0	3
10,0 ≤ 15,0	4

* Glyplanke word met bande aan stapel vasgebind.
Skids are strapped to bundle.

1. HOEKSTUT
   CORNER BRACKET
2. DEKPLAAT
   COVER SHEET
3. HOEKPLAAT
   ANGLE BRACKET
4. BAND
   STRAP
5. WATERWERENDE PAPIER
   WATER REPELLENT PAPER
6. GLYPLANKE
   SKIDS

B. BEDEKKINGSTELSELS / COATING SYSTEMS

1. VERFSTELSELS

Die volgende standaard verfstelsels is in die ondergenoemde kleure beskikbaar tensy anders uitdruklik gespesifiseer.

(a) VERFSTELSELS *

VERFTIPE/PAINT TYPE	DROË VERF DIKTE DRY PAINT THICKNESS (MIKRON/MICRON)	KOMBINASIE BEPERKINGS/ COMBINATION RESTRICTIONS
Epoksie/Epoxy	5	Geen/None
Poliëster/Polyester	20	Geen/None
Standaard ruglaag/ Standard backing coat	((15	Slegs grys Grey only

(b) STANDAARD VERFKLEURE

KODE/CODE	KLEUR/COLOUR	AANWENDING BEPERKINGS/ APPLICATION RESTRICTIONS
SABS 1091 D18	Aalwyngroen/Aloe Green	Geen/None
" F07	Asuurblou/Azure Blue	"
" B03	Buffelbruin/Buffalo Brown	"
" G08	Leiklipgrys/Slate Grey	"
" C59	Sandsteenbeige/Sandstone Beige	"
" G24	Duifgrys/Dove Grey	"
" C37	Vosbruin/Chestnut Brown	"
" C69	Kalkklipwit/Lime White	"
" C12	Olyfgroen/Olive Green	"
" A04	Okerrooi/Orchre Red	"
" E18	Brandergroen/Surf Green	"

* Vir beskerming van voorafbedekte oppervlaktes kan dit met plastiek bedek word om beskadiging van verfoppervlakte te verhoed.

(c) VERFGLANSREEKS

Standaard - 30% teen 60^0
Ander - op aansoek

1. PAINT SYSTEMS

The following standard paint systems in the folowing colurs are available unless otherwise specified.

(a) PAINT SYSTEMS *

(b) STANDARD PAINT COLOURS

* For protection of coated area a plastic film may be specified to prevent damage of paint area.

(c) PAINT GLOSS RANGE

Standard - 30% at 60^0
Other - on application

CLASSIFICATION

GEKLASSIFISEER

STANDAARDVERVAARDIGINGSPRAKTYK/
STANDARD MANUFACTURING PRACTICE

CHROMADEK SUPRASPAN PROFIELFYNPLAAT

1. SPESIFIKASIES

1.1 SPESIFIKASIE

Hierdie spesifikasie het betrekking op Handelskwaliteit-Profielfynplaat vervaardig uit 'n koolstofstaalfynplaat en bedek met sink(versink) deur die aaneenlopende warmdompelversinkingsproses.

1.2 DEKLAAGADHESIE

Adhesie moet sodanig wees dat daar geen afvlokking van die deklaag by die voltooide patroon sal wees nie.

1.3 DEKLAAGMASSA

Die massa van die sinkdeklaag is die totale hoeveelheid sink op albei kante van die fynplaat uitgedruk in gram per vierkante meter van die fynplaat.
Die massa van die sinkdeklaag vir die verskillende deklaagaanduidings moet voldoen aan die vereistes vir "Triple"- en "Single Spot" - minimumtoetsperke volgens die volgende tabel:-

CHROMADEK SUPRASPAN PROFILE SHEETS

1. SPECIFICATIONS

1.1 SPECIFICATION

This specification refers to Commercial Quality Profile Sheets produced from a carbon steel sheet zinc coated (galvanised) by the continuous hot-dip galvanising process.

1.2 COATING ADHESIVE

Coating adhesive shall be such that there will be no flaking of the coating in the finished pattern.

1.3 COATING MASS

The mass of the coating is the total amount of zinc on both sides of the sheet expressed in grams per square metre of sheet.
The mass of the coating for the various coating designations shall conform to the requirements for Triple and Single Spot minimum check limits according to the following table:-

DEKLAAG-AANDUIDING/ COATING DESIGNATION	MASSA VAN DEKLAAG IN GRAM PER m^2/MASS OF COATING IN GRAMS PER m^2	
	'TRIPLE SPOT TEST' MIN. DEKLAAG/ TRIPLE SPOT TEST MIN. COATING	'SINGLE SPOT TEST' MIN. DEKLAAG SINGLE SPOT TEST MIN. COATING
G275	275	250
G425	425	350

2. GROOTTEREEKS

2.1 STANDAARDDIKTE (MM) (NA VERSKINKING)

1,6; 1,2; 1,0; 0,8; 0,6; 0,5.

2.2 PROFIELE EN LENGTE

2. RANGE OF SIZES

2.1 STANDAARD THICKNESS (MM) AFTER COATING

1,6; 1,2; 1,0; 0,8; 0,6; 0,5.

2.2 PROFILES AND LENGTH

PROFIEL/ PROFILE	STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING mm	STANDAARDLENGTES (IN TRAPPE VAN 100 mm)/ STANDARD LENGTHS (INCREMENTS OF 100 mm) Meter/Metres
S-RIB		
8,5/76	0,5 - 1,2	3,3 - 15,0
10,5/76	0,5 - 1,2	3,3 - 15,0
DELTA-RIB	0,5 - 1,6	3,3 - 15,0

3. BEREKENDE GETAL METER PER TON

3. CALCULATED NUMBER OF METRES PER TON

STANDAARDDIKTE NA VERSINKING/ STANDARD THICKNESS AFTER COATING	NOMINALE GETAL METER PER TON BEDEKTE FYNPLAAT/ NOMINAL NUMBER OF METRES PER TON OF COATED SHEET		
	S-RIB		DELTA-RIB
	8,5/76	10,5/76	
	DEKLAAGAANDUIDING/COATING DESIGNATION		
(mm)	G275		
1,6	-	-	75
1,2	136	111	100
1,0	163	133	120
0,8	201	168	150
0,6	265	218	200
0,5	318	261	240

GEKLASSIFISEER

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4. TOLERANSIES/TOLERANCES

4.1 METER PER TON

Die toelaatbare afwyking onder die nominale getal meter per ton geneem oor al die fynplate van een grootte en een dikte na een bestemming is soos volg:-

4.1 METRE PER TON

The permissible variation below the nominal number of metres per ton, taken over all the sheets of one size and one thickness to one destination shall be the following:-

MASSA VERSEND PER ITEM (TON)/ CONSIGNMENT MASS PER ITEM (TONS)	TOELAATBARE AFWYKING ONDER NOMINALE GETAL METER PER TON / PERMISSIBLE VARIATION BELOW NOMINAL METRES PER TON	
	G275	G425
	%	%
5	10,0	20
5 - < 20	7,0	14
20	3,5	7

OPMERKING

Vir enige gespesifiseerde deklaag kan die nominale basismetaaldikte verkry word deur 0,04 mm van die bestelde dikte (na versinking) af te trek.

NOTE

For any specified coating the nominal base metal thickness may be obtained by deducting 0,04 mm from the ordered coated thickness.

4.2 LENGTETOLERANSIE

Onder (-) Geen
Oor (+) 20 mm

4.2 LENGTH TOLERANCE

Under (-) Nil
Over (+) 20 mm

4.3 PROFIELTOLERANSIE

4.3 LENGTH TOLERANCE

	S-RIB mm	DELTA-RIB mm
(i) Diepte van Profiel/Depth of Profile	17,5 (maks/max)	46,5 (maks/max)
Dieptetoleransie /Depth Tolerance		
Standaardproduk/Standard Product	+0 - 1,5	+0 - 2,0
Vol-hard-produk/Full Hard Product	+0 - 2,5	+0 - 4,0
(ii) Wydte tussen buitenste Kruine van Profiel/ Width between outermost Crests of Profile		
8,5/76	610	-
10,5/76	762	-
Delta-Rib	-	750
Wydtetoleransie tussen die buitenste kruine of tussen enige twee naasgeleë kruine - / Tolerance between width of outermost crest or between any two adjacent crests -		
Standaardproduk/Standard Product	+3,0 - 3,0	+3,0 - 3,0
Vol-hard-produk/Full Hard Product	+5,0 - 5,0	+6,0 - 6,0

4.4 NIE-HAAKS-TOLERANSIE

Nie-haaks is die grootste afwyking van 'n kant van 'n reguit lyn reghoekig met 'n sy en rakende die een hoek. Die nie-haaks-toleransies vir profiel fynplaat is soos volg:-

4.4.1 Lengtes < 4,8 m - alle diktes -
8,5/76 .....7,5 mm
10,5/76 en Delta-Rib.....9,0 mm

4.4.2 Lengtes ≥ 4,8 - 12,3 m - alle diktes
8,5/76.....15,0 mm
10,5/76 en Delta-Rib.....18,0 mm

4.4 OUT OF SQUARE TOLERANCE

Out of square is the greatest deviation of and edge from a straight line at right angles to a side and touching one corner. The out of square tolerances for profile sheets are as follows:-

4.4.1 Lengths < 4,8 m - all thicknesses -
8,5/76 .....7,5 mm
10,5/76 and Delta-Rib.....9,0 mm

4.4.2 Lengths ≥ 4,8 - 12,3 m - all thicknesses
8,5/76.....15,0 mm
10,5/76 and Delta-Rib.....18,0 mm

Nuwe Bladsy/New Page

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4. TOLERANSIES (VERVOLG) TOLERANCES (CONTINUED)

4.5 PLATHEID TOLERANSIE

4.5.1 Enige fynplaat ⩽ 0,6 mm dik wat op 'n plat horisontale oppervlak geplaas word kan ligte kant rimpels hê, nie hoër nie as 2,0 mm wat voorkom langs die kantoorslag.

4.5.2 Vir fynplate ⩽ 0,6 mm dik en groter as >3,6 m lank word 'n maksimum afwyking van 5 mm vanaf 'n plat horisontale vlak toegelaat.

NOTA:
Vir materiaal in die volhard toestand word die bogenoemde toleransies (par. 4.4 en 4.5) verdubbel.

4.5 FLATNESS TOLERANCE

4.5.1 Any sheet ⩽ 0,6 mm thick laid on a flat horizontal surface is permitted to have light edge ripples not higher than 2,0 mm occurring along the side laps.

4.5.2 For sheets ⩽ 0,6 mm thick and >3,60 m long a maximum deviation of 5 mm from a flat horizontal surface is permitted.

NOTE:
For material in the full hard condition the abovementioned tolerances (par. 4.4 and 4.5) are doubled.

4.6 OORMAAT EN ONDERMAAT

Die reg word voorbehou om materiaal wat bestel is, te voorsien binne die volgende toleransies:-

4.6 OVERAGE AND UNDERAGE

The right is reserved to supply the tonnage ordered within the following tolerances:-

MASSA VAN BESTELDE ITEMS OF DIE BEREKENDE MASSA VAN AANTAL PLATE BESTEL/ MASS OF ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF SHEETS ORDERED	OORMAAT (+)/ONDERMAAT (-)/ OVERAGE (+)/UNDERAGE (-)	
TON(S)	TON(S)	
2 - < 5	+1	-1
5 - < 10	+2	-3
10 - < 20	+3	-4
20 - < 40	+4	-5
40 - < 100	+4	-6
⩾ 100	+6	-10

Indien 'n minimum of maksimum hoeveelheid gespesifiseer word sal die oormaat of ondermaat die totaal van die toepaslike plus en minus toleransie wees.
Vir beperkings op bogenoemde toleransie verwys bladsy P3, par. 6.

Where a minimum or maximum quantity is specified, the overage or underage will be the total of the applicable plus and minus tolerance.
For restrictions on the above tolerances refer page P3, par. 6.

5. ALGEMENE INLIGTING/GENERAL INFORMATION

5.1 VERPAKKING

Alle Chromadek Profiel Fynplate word verpak in bondels, behoorlik gebind deur middel van bande.
Verwys bladsy P3, par. 7.

5.1 PACKING

All Chromadek Profile Sheets are packed in bundles suitably tied by means of bands. Refer Page P3, par. 7.

5.2 DEKKAPASITEIT

Die effektiewe dekwydte van 'n fynplaat nadat voorsiening gemaak is vir een steekoorslag is die volgende:-

5.2 COVERING CAPACITY

The effective covering width of a sheet after making allowance for one pitch overlap is the following:-

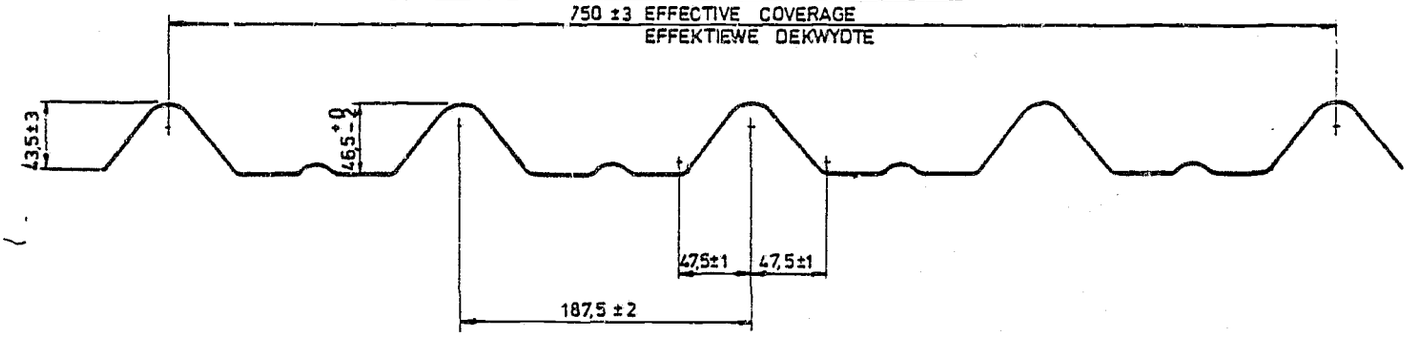
PROFIEL/ PROFILE	NOMINALE DEKWYDTE/ NOMINAL COVERING WIDTH
	mm
8,5/76	610
10,5/76	762
SUPRASPAN DELTARIB	750

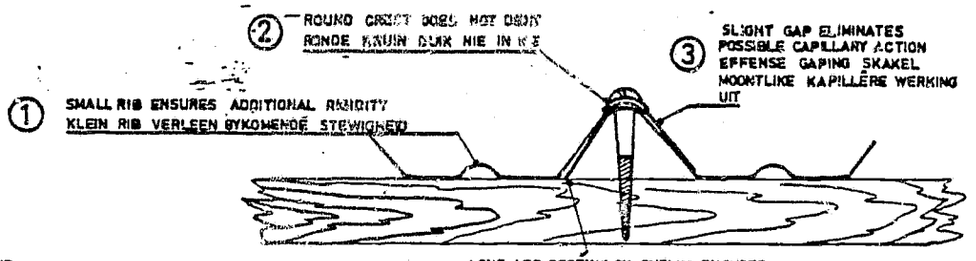
Nuwe Bladsy/New Page

UNCONTROLLED COPY

SUPRASPAN DELTA - RIB

(STANDARD HARDNESS COMMERCIAL QUALITY SHEETS ONLY)
(SLEGS STANDAARDHARDHEID HANDELSKWALITEIT FYNPLATE)




2 ROUND CREST DOES NOT CUT
RONDE KRUIN SNY NIE IN NIE
3 SLIGHT GAP ELIMINATES POSSIBLE CAPILLARY ACTION
EFFENSE GAPING SKAKEL MOONTLIKE KAPILLÊRE WERKING UIT
1 SMALL RIB ENSURES ADDITIONAL RIGIDITY
KLEIN RIB VERLEEN BYKOMENDE STEWIGHEID
4 LONG LEG RESTING ON PURLIN ENSURES ADDITIONAL RIGIDITY AT THE LAP JOINT
LANG BEEN WAT OP KAPLAT STEUN, VERSEKER BYKOMENDE STEWIGHEID BY DIE KANTLAS

TE: INFORMATION ON THE USE OF DELTA-RIB SHEETS IS AVAILABLE ON APPLICATION

VERKRYG: INLIGTING OOR DIE AANWENDING VAN DELTA-RIB-PLATE IS OP AANVRAAG BESKIKBAAR

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CHROMADEK PROFIELFYNPLAAT

GEBRUIKSAANWYSINGS

1. Stel heersende windrigting vas
2. Die profielfynplate word in die teenoorgestelde rigting gelê.
3. Indien daar van links na regs gelê word, sorg dat die afwaartse kant van die plate aan die linkerkant is. Indien nie, draai die plate deur 180^0 oor die lengte. (Vir die lê van regs na links is die afwaartse kant aan die regterkant.)
4. Daar word aanbeveel dat die een plaat bo die ander geplaas word soos in die skets hieronder aangedui.
5. Maak voorsiening vir 'n entoorslag van minstens 150 mm en 'n helling van minstens 5^0.

10,5/76 mm CHROMADEK PROFIELFYNPLAAT IN LANG LENGTES

CHROMADEK PROFILE SHEETS

GUIDANCE FOR USE

1. Determine direction of prevailing wind
2. Profile sheets must be laid in opposite direction to that of wind.
3. If the sheets are laid from left to right, see that the downward side of the sheets is on your left. If not, turn the sheets around through 180^0 lengthwise. (For laying from right to left, the downward side is on the right hand side).
4. It is recommended that sheets be placed over one another as indicated in sketch below.
5. Provide for an end overlap of at least 150 mm and a pitch of at least 5^0.

10,5/76 mm CHROMADEK PROFILE SHEETS IN LONG LENGHTS

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DECLASSIFIED

S.P.E. 150

YSKOR BEPERK ISCOR LIMITED

ELEKTROLITIESE TINPLAAT

ELECTROLYTIC TINPLATE

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ELEKTROLITIESE TINPLAAT

VOORWOORD

1. Bestellings word aanvaar ooreenkomstig ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling ooreenkomstig ons Algemene Verkoopsvoorwaardes geskied.
3. Alle items is onderworpe aan 'n 'oormaat' of 'ondermaat' ooreenkomstig bladsy S8 par. 9.1.
4. Elektrolitiese Tinplaat word verkoop teen 'n prys per Système International tinplaat oppervlakte (SITO) (dieselfde as Smot.)
5. Ekstras en aftrekkings hierin gekwoteer is per Système International tinplaat oppervlakte (SITO) (dieselfde as Smot). Elke ekstra is afsonderlik en uitdruklik.
6. Pryse en ekstras is die wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.
7. Wanneer Elektrolitiese Tinplaat bestel word, moet die klante altyd die eindgebruik spesifiseer.
8. Na aanname kan bestellings nie in geheel of gedeeltelik gekanselleer of op enige wyse hoegenaamd gewysig word nie, behalwe deur spesiale skriftelike ooreenkoms met die Korporasie. Indien 'n bestelling gewysig word, word die prys op die gewysigde bestelling weer bepaal.
9. Die publikasie van hierdie pryslys plaas nie die Korporasie onder 'n verpligting om die gekwoteerde kwaliteite en groottes te alle tye te lewer nie.
10. Alvorens klante material verwerk, moet hulle verseker dat dit aan hul vereistes voldoen. Versuim in hierdie verband kan-'n eis ongeldig maak. Die Korporasie skryf geen kontroleer-/toetsmetode voor nie, maar sodanige metode kan visuele kontrolering, eenvoudige dimensionele kontrolering, verwysing na toetssertifikate en meer omvattende toetse behels, afhangende van die gesofistikeerdheid van die aanwending.

ELECTROLYTIC TINPLATE

PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale, and the provisions of this S.P.E.
2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.
3. All items are subject to an 'overage' or 'underage' in terms of par. 2.2.7 page S8 par. 9.1.
4. Electrolytic Tinplate is sold at a price per Système International tinplate area. (SITA) (Same as Smat.)
5. Extras and deductions quoted herein are per Système International tinplate area. (SITA) (Same as Smat). Each extra is separate and distinct.
6. Prices and extras are those ruling on date of dispatch and are subject to change without notice.
7. When ordering Electrolytic Tinplate the customers should always state the end use.
8. After acceptance, orders cannot be cancelled in whole or in part or altered in any manner whatsoever except by special agreement with the Corporation in writing. Should an order be modified, the order as amended, will be repriced.
9. The publication of this price list does not place the Corporation under an obligation to supply the quoted qualities and sizes at all times.
10. Before processing material, customers must ensure that it meets their requirements. Non-compliance in this regard may invalidate a claim. The Corporation does not prescribe any checking/testing method, but such method can involve visual checks, simple dimensional checks, reference to test certificates and more extensive tests, depending on the sophistication of the application.

INHOUD

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S.P.E. 150

YSKOR BEPERK

ISCOR LIMITED

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN

(a) Bestemming
  (i) Posadres
  (ii) Aflewerингsadres
(b) Aflewering verlang
  (i) Datum
  (ii) Spoorvervoer
  (iii) Padvervoer

2. PRODUK:

(a) Hoeveelheid (Totale massa van elke item)
(b) Afmetings
  (i) Dikte
  (ii) Wydte
  (iii) Lengte
(c) Kwaliteit
(d) Inspeksie verlang - spesifiseer
(e) Sertifisering - tipe sertifikate
(f) Verpakking - spesifiseer
(g) Oppervlak afwerking
(h) Eind-gebruike

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Beperking op oor-/ondermaat
4. Deklaagekstras
5. Dikte
6. Wydte
7. Lengte
8. Kwaliteit
9. Verpakking en merking
10. Toets/Gietanalise sertifikate

C PWV - GEBIED

Bestaande uit die landdrosdistrikte van: Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonarea en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL

(a) Destination
  (i) Postal address
  (ii) Consignment address
(b) Delivery required
  (i) Date
  (ii) Rail Transport
  (iii) Road Transport

2. PRODUCT:

(a) Quantity (Total mass of each item)
(b) Dimensions
  (i) Thickness
  (ii) Width
  (iii) Length
(c) Quality
(d) Inspection required - specify
(e) Certification - type of certificates
(f) Packing - specify
(g) Surface finish
(h) End uses

B CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Restriction on over-/underage
4. Coating extras
5. Thickness
6. Width
7. Length
8. Quality
9. Packing and marking
10. Test/Cast Analysis Certificates

C. PWV - AREA

Consisting of the magisterial districts of: Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonarea and Wonderboom.

1980-10-01

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1980-06-20

DECOMMISSIONED

ELEKTROLITIESE TINPLAAT / ELECTROLYTIC TINPLATE

A. PRYSE/PRICES

(Alle pryse per Système International tinplaat oppervlakte (SITO))

(All prices per Système International tinplate area (SITA))

1. BASISPRYS/BASIS PRICE R124-25

(Prys per SITO 0,19 mm dik in rolle), v.o.s. S.A.S.-versendingsadres in die R.S.A. en S.W.A.
Pryse is vir ONGESORTEERDE materiaal. (Ongesorteerde materiaal beteken primas en tweedes tesaam).

(Prices per SITA 0,19 mm thick in coils), f.o.r. S.A.R. consigning address in R.S.A. and S.W.A.
Prices are for UNASSORTED material. (Unassorted material means primes and seconds together).

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS/ QUANTITY EXTRAS AND DEDUCTIONS

2.1 ITEMEKSTRAS/AFTREKKINGS

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestellings deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.1 ITEM EXTRAS/DEDUCTIONS

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

ITEM	EKSTRA/EXTRA	AFTREKKING/DEDUCTION
TON/TONS	R.c./SITO/SITA	R.c./SITO/SITA
< 12	Op aansoek /	On application
12 - < 25	2-75	
25 - < 75	1-10	
75 - < 150	0-00	0-00
150 - < 300		1-85
300 - < 500		2-75
⩾ 500		3-70

2.2 BEPERKING OP OOR- OF ONDERMAAT TOELATING (Verwys bladsy S8, par. 9.1)

(i) 50% beperking van standaard oor- of ondermaat toelating (2408) R8-40

(ii) Wanneer 2½% oor- of ondermaat van item massa gespesifiseer word (2409) R12-90
(Slegs van toepassing op items onder 100 ton).

2.2 LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE (Refer page S8, par. 9.1)

(i) 50% limitation of standard overage or underage allowance (2408) R8-40

(ii) When 2½% overage or underage of item mass if specified (2409) R12-90
(Applicable only to items under 100 tons).

1982-01-01A

Kanselleer en vervang uitgawe gedateer
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(Tinplaat prysverhoging van 1982-01-01 word hiermee gekanselleer - Cancellation of 1982-01-01 Tinplate price increase)

1982-01-01

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YSKOR BEPERK — ISCOR LIMITED

ELECTROLYTIC TINPLATE

3. DEKLAAGEKSTRAS/COATING EXTRAS

KODE/ CODE	AANWYSING OF KODE / DESIGNATION OR CODE	NOMINALE DEKLAAGMASSA g/m² / NOMINAL COATING MASS g/m²	EKSTRA (R.c.) PER SITO / EXTRA (R.c.) PER SITA
2122	EF	2,8 (1,4/1,4)	5-15
2665	E 1	5,6 (2.8/2,8)	10-10
2666	E 2	11,2 (5,6/5,6)	20-20
2667	E 3	16,8 (8,4/8,4)	30-25
2668	E 4	22,4 (11,2/11,2)	40-35
2669	E 5	30,2 (15,1/15,1)	54-50
3165	D1/F	2,8/1,4	7-80
2664	D2/F	5,6/1,4	12-85
2670	D 2/1	5,6/2,8	15-85
2671	D 3/1	8,4/2,8	20-40
2672	D 3/2	8,4/5,6	25-90
2673	D 4/1	11,2/2,8	25-90
2674	D 4/2	11,2/5,6	30-45
2675	D 4/3	11,2/8,4	36-05
2676	* D 5/1	15,1/2,8	32-50
2677	* D 5/2	15,1/5,6	37-05
2678	* D 5/3	15,1/8,4	42-40
2691	* D 5/4	15,1/11,2	47-60

* Nie vir uitvoer.

* Not for export.

4. GROOTTE-EKSTRAS/AFTREKKINGS/ SIZE EXTRAS/DEDUCTIONS

4.1 Dikte-ekstras

4.1 Thickness Extras

DIKTE (mm)/ THICKNESS (mm)	EKSTRA (R.c. PER SITO)/ EXTRA (R.c. PER SITA)
0,19	0-00
0,21	3-45
0,22	5-30
0,23	7-30
0,25	11-65
0,26	13-90
0,28	18-80
0,30	24-10
0,31	27-30
0,33	33-90
0,35	40-50
0,38	50-25

4.2 Wydte-ekstras (Min. trappe 2 mm)
Wanneer albei afmetings minder as 950 mm is, word die grootste afmeting geag die wydte te wees, tensy die klant die kleiner afmeting as die wydte verlang.

4.2 Width Extras (min. increments 2 mm)
When both dimensions are less than 950 mm the greater dimension will be considered as the width unless the customer requests the lesser dimension as the width.

WYDTE (mm) / WIDTH (mm)	EKSTRA (R.c. PER SITO) / EXTRA (R.c. PER SITA)
640 - 660	2-00
> 660 - 680	1-40
> 680 - 700	0-90
> 700 - 750	0-60
> 750 - 900	0-00
> 900 - 950 maks/max	0-60

OPMERKING: Wydtes onder 640 mm en oor 950 mm ops aanvraag.

NOTE: Widths under 640 mm and over 950 mm on application

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated
(Tinplaat prysverhoging van 1982-01-01 word

4. GROOTTE-EKSTRAS/AFTREKKINGS (VERVOLG)
SIZE EXTRAS/DEDUCTIONS (CONTINUED)

4.3 Lengte-ekstras (Min. trappe 2 mm)
4.3 Length Extras (Min. increments 2 mm)

LENGTE (mm) / LENGTH (mm)	EKSTRA (R.c. PER SITO) / EXTRA (R.c. PER SITA)
460 - < 640	R7-80
640 - 920	R6-50
>920 - 1 090 maks./max.	R7-10

4.4 ROLMASSA/MASS OF COILS

GESPESIFISEERDE MAKSIMUM MASSA EN VERPAKKING EKSTRAS/
SPECIFIED MAXIMUM MASS AND PACKING EXTRAS

MASSA/MASS TON(S)	MAKSIMUM MASSA/ MAXIMUM MASS KODE/CODE	VERPAKKINGSKODES/PACKING CODES	
		KODE/CODE 60 EKSTRA/EXTRA	KODE/CODE 61 EKSTRA/EXTRA
		R.c. per SITO/SITA	R.c. per SITO/SITA
2	02	3-60	3-60
3	03	3-60	3-60
4	04	1-10	1-10
5	05	1-10	1-10
6	06	0-00	0-00
7	07	0-00	0-00
8	08	0-00	0-00
9	09	0-00	0-00
10	10	0-00	0-00

OPMERKING:
(a) Werklike massa van rolle kan nie op bestellings gespesifiseer word nie.
(b) Massa van rolle versend sal volgens Yskor se keuse wees maar sal nie die gespesifiseerde maksimum massa oorskry nie.
(c) Kode 60 - Verpak op platvorms met kern vertikaal.
(d) Kode 61 - Verpak op wiegstukke met kern horisontaal (minimum dikte 0.30 mm).
(e) Verwys na bladsy S8 par. 8.1.2.

NOTE:
(a) Orders cannot specify exact mass of coils.
(b) Mass of coils despatched will be at Iscor's option but will not exceed the specified maximum mass.
(c) Code 60 - Packed on platforms with core vertical.
(d) Code 61 - Packed on cradles with core horizontal (minimum thickness 0.30 mm).
(e) Refer to page S8 par. 8.1.2.

1982-01-01A

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YSKOR BEPERK ISCOR LIMITED

ELECTROLYTIC TINPLATE

5. KWALITEITSEKSTRAS / QUALITY EXTRAS

KODE/ CODE	TIPE/TYPE	TEMPERAANWYSING/ TEMPER DESIGNATION	Ekstra (R.c. per SITO) Extra (R.c. per SITA)
138	MR	T.50	3-25
037	D	T.50	9-25
139	MR	T.52	2-00
140	MR	T.57	0-00
141	MR	T.61	0-00
213	MR	T.65 *	0-00
334	MR	T.70 *	4-50

GROOTTE BEPERKINGS

213 MR. T65
Diktereeks
0,20mm min. tot 0,35mm maks.
Maks. wydte 915mm

334 MR T70
Diktereeks
0,26mm min. tot 0,35mm maks.
Maks. wydte 915mm

SIZE LIMITATIONS

213 MR. T65
Thickness range
0,20mm to 0,35mm max.
Max. width 915mm

334 MR T70
Thickness range
0,26mm min. to 0,35mm max.
Max. width 915mm

6. VERPAKKING/PACKING

6.1 Tinplaat lengtes ..... Geen ekstra
(Verwys na bladsy S8 par. 8.1.1)

6.2 Tinplaat in rolle
(a) Verpak op platforms met die die kern vertikaal (kode 60) ..... Geen ekstra
(b) Verpak op wiegstukke met die kern horisontaal (Kode 61) (min. dikte 0,30 mm) ..... Geen ekstra
(Verwys bladsy S8 par. 8.1.2).

6.1 Tinplate sheets ..... No extra
(Refer to page S8 par. 8.1.1)

6.2 Tinplate in coils
(a) Packed on platforms with core vertical ... (Code 60) ..... No extra
(b) Packed on cradles with core horizontal (Code 61) (minimum thickness 0,30 mm) No extra
(Refer to page S8 par. 8.1.2)

7. TOETS- EN/OF GIETANALISESERTIFIKATE / TEST AND/OR CAST ANALYSIS CERTIFICATES

(Gietpotanalise)
- Wanneer nie deur die staalspesifikasie vereis nie, geld die volgende ekstras:-

(Ladle Analysis)
When not called for by the steel specification, the following extras will apply:-

PER ITEM (TON/TONS)	GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2003)	TOETS EN GIETANALISE-SERTIFIKATE (GIETPOTANALISE)/ TEST AND CAST ANALYSIS CERTIFICATES (LADLE ANALYSIS) (2005)
	R.c.	R.c.
0 -<10	4-00	7-85
10 -<20	3-35	6-95
20 -<30	1-80	4-00
30 -<40	1-45	2-70
⩾40	0-90	1-60

1982-01-01A

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated
(Tinplaat prysverhoging van 1982-01-01 word hiermee gekanselleer - Cancellation of 1982-01-01 Tinplate price increase)

1982-01-01

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ELEKTROLITIESE TINPLAAT — ELECTROLYTIC TINPLATE

B. STANDAARDVERVAARDIGINGSPRAKTYK / STANDARD MANUFACTURING PRACTICE

1. INLEIDING/INTRODUCTION

Yskor se Elektrolitiese Tinplaat word geproduseer op 'n halogeentipe vertinningsbaan uit koudgereduseerde, deurlopende- of lotuitgegloeide, tempergewalste swartplaatrolle.
Die staalbasis is gewoonlik MR-tipe staal wat 'n lae koolstof-sproeistaalkwaliteit is.
Residu-elemente, soos nikkel, chroom en fosfor, word op 'n lae vlak gehou, en koper word beheer tot 0,20% maksimum.

Tempervalsing verleen die verlangde afwerking en mate van styfheid en hardheid aan die staalbasis.
Die finale keuse en verwerking van die staalbasis hang hoofsaaklik af van die eindgebruik van die tinplaat, en dit is derhalwe belangrik dat die eindgebruik in die bestelling vermeld word.
Die staalbasis word met handelsuiwer-tin bedek.

Iscor Electrolytic Tinplate is produced on a halogen-type tinning line from cold reduced, continuous or batch annealed. temper rolled blackplate coils.
The steel base is normally MR type steel which is a low carbon rimming quality.
Residual elements such as nickel, chromium and phosphorus are maintained at a low level and copper is controlled to 0,20% maximum.
Temper rolling imparts the desired finish and degree of stiffness and hardness to the steel base.
Final selection and processing of the steel base will depend mainly on the end use of the tinplate, and it is therefore important that the end use is stated on the order.

The steel base is coated with commercially pure tin.

2. OMSKRYWINGS/DEFINITIONS

2.1 **STANDAARD-METRIEKE OPPERVLAKTE VIR TINPLAAT (SITO)**

Die Système International tinplaat oppervlakte is die handelsoppervlakte-eenheid, nl. 100 vierkante meter, gelykstaande met die oppervlakte bedek deur 100 tinplate van 1 meter x 1 meter.

2.2 **PAKKET**
'n Pakket is gewoonlik 100 tinplate van enige bepaalde bestelde grootte.

2.3 **LAAIPAKKET**
'n Laaipakkat is 'n veelpakketeenheid wat bestaan uit 'n gerieflik getal pakkette.
Die maksimum massa van 'n laaipakket is 1 800 kg.

2.4 **VERHOUDING**
Die verhouding is die wiskundige verband tussen die oppervlakte van die gegewe plaatgrootte en die oppervlakte van die plaatgrootte gebruik om die Système International tinplaat oppervlakte te omskryf, d.w.s. 1 meter x 1 meter.

2.5 **DIKTEMAAT**
Diktemaat word uitgedruk in veelvoude van 0,01 mm.

2.6 **TEMPER**
Temper is die graad van hardheid of styfheid wat op chemiese wyse en gedurende tempervalsing aan die staal verleen word en word aangedui deur die letter 'T' gevolg deur 'n syfer, bv. T52

2.7 **DEKLAAGMASSA**
Die deklaagmassa word uitgedruk as gram per vierkante meter en verteenwoordig die totale tindeklaag per vierkante meter tinplaat.
'E' dui aan diecelfde deklaag aan albei kante.
'D' dui aan gedifferensieerde deklaag, d.w.s. 'n plaat waarvan die een kant 'n swaarder deklaag het as die teenoorgestelde kant.

2.1 **STANDARD METRIC AREA FOR TINPLATE (SITA)**

The Système International tinplate area is the trading unit of area, namely 100 square metres, equivalent to the area covered by 100 tinplate sheets of 1 metre x 1 metre.

2.2 **PACKAGE**
A package or case is normally 100 tinplate sheets of any one particular ordered size.

2.3 **STILLAGE**
A stillage is a multi-package unit consisting of a convenient number of packages.
The maximum mass of a stillage is 1 800 kg.

2.4 **RATIO**
The ratio is the mathematical relationship between the area of the given sheet size and the area of the sheet size used in defining the Système International tinplate area, i.e. 1 metre x 1 metre.

2.5 **THICKNESS**
Thickness is expressed in multiples of 0,01 mm.

2.6 **TEMPER**
Temper is the degree of hardness or stiffness imparted to the Steel base by chemical means and temper rolling and is designated by the prefix 'T' followed by a number, e.g. T52

2.7 **COATING MASS**
Coating mass is expressed as grams per square metre and represents the total tin coating per square metre of tinplate.
'E' designates equally coated faces.

'D' designates differential coating, i.e. a sheet having one surface more heavily coated than the opposite.

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YSKOR BEPERK ISCOR LIMITED

ELECTROLYTIC TINPLATE

3. KWALITEITE EN TEMPERS/QUALITIES AND TEMPERS

KWALITEITS- EN TEMPERAANWYSING, ROCKWELL-HARDHEID EN VORMINGSEIENSKAPPE

QUALITY AND TEMPER DESIGNATION, ROCKWELL HARDNESS AND FORMING CHARACTERISTICS

KWALITEIT / QUALITY	AANWYSING / DESIGNATION	VERWAGTE HARDHEIDSBESTEK: ROCKWELL 30TS / EXPECTED HARDNESS RANGE: ROCKWELL 30TS	VORMINGSEIENSKAPPE / FORMING CHARACTERISTICS
Dieptrek/ Deep Drawing	T50	52 maks./max	Rekbaar en geskik vir strawwe of veelvoudige trekke. (Kaels, spuitstukke, ens.)/ Ductile and suitable for severe or multistage draws. (Cones, nozzles, etc.)
Diepvormstamp/ Deep Stamping	T52	48 - 56	Matig rekbaar met 'n mate van styfheid en geskik vir vlakgetrekte komponente (oorpasdeksels, getrekte rompe, skroefdoppe, ens.)/ Moderately ductile with a degree of stiffness and suitable for shallow-drawn components. (Slip lids, drawn bodies, screw caps etc.)
Gewone Vormstamp/ Ordinary Stamping	T57	54 - 61	Kwaliteit vir algemene doeleindes (entstukke, inpasdeksels, ringe, rompe, ens.)/ General purpose quality. (Ends, triple tight lids, rings, bodies, etc.)
Gewone Vorming/ Ordinary Forming	T61	57 - 65	Kwaliteit vir algemene doeleindes met bykomende styfheid (stywer rompe waar riffelvorming vermy moet word, ente vir groter houers, botteldoppies, ens.)/ General purpose quality with additional stiffness. (Stiffer bodies where fluting must be avoided, ends for larger containers, crown corks, etc.)
Gewone Vormstamp/ Ordinary Stamping	T65	62 - 68	Kwaliteit vir algemene doeleindes (stywe entstukke)/ General purpose quality (stiff ends)
Genitrogeneerde Staal/ Nitrogenised Steel	T70	67 - 73	Kwaliteit vir baie stywe entstukke (bv. bierblikentstukke)/ Quality for very stiff ends (e.g. beer can ends)

§Hierdie waardes is gebaseer op die gebruik van die diamantaambeeld.

OPMERKINGS:

(a) Dun plaat (dunner as ongeveer 0,21 mm) word normaalweg getoets deur gebruik te maak van die 15-T Rockwell-skaal, en die resultate word omgereken tot die 30-T Rockwell-skaal.

(b) Die verwagte hardheidsbestek is op die getinde staalbasis.

§These values are based on the use of the diamond anvil.

NOTES:

(a) Thinner plate (below approximately 0,21 mm) is normally tested using the 15T Rockwell scale and the results converted to the 30-T Rockwell scale.

(b) The expected hardness range is on the tinned steel base.

4. GROOTTES/SIZES

4.1 GROOTTE-AFMETINGS

4.1.1 GESNYDE LENGTES

Maksimum tinplaatgrootte 1090 mm x 950 mm
Minimum tinplaatgrootte 460 mm x 640 mm

Opmerkings

(a) Slegs minimum trappe van 2 mm is aanvaarbaar.

(b) Sommige tinplaatgroottes buite die minimum reekse, mag slegs deur 'n spesiale reëling gelewer word.

(c) Wanneer albei afmetings minder as 950 mm is, word die grootste afmeting gesag die wydte te wees, tensy die klant die kleiner afmeting as die wydte verlang.

4.1.2 ROLLE

Maksimum rolwydte 950 mm
Minimum rolwydte 640 mm

OPMERKINGS

(a) Minimum trappe van 2 mm is aanvaarbaar.

(b) Sommige groottes buite die minimum reeks mag slegs deur 'n speciale reëling gelewer word.

4.1 SIZE DIMENSIONS

4.1.1 CUT LENGTHS

Maximum tinplate size 1090 mm x 950 mm
Minimum tinplate size 460 mm x 640 mm

Notes

(a) Minimum increments of 2 mm only are acceptable.

(b) Certain tinplate sizes outside the minimum ranges may be supplied by special arrangements only.

(c) When both dimensions are less than 950 mm the greater dimension will be considered as the width, unless the customer requests the lesser dimension as the width.

4.1.2 COILS

Maximum coil width 950 mm
Minimum coil width 640 mm

NOTES

(a) Minimum increments of 2 mm only are acceptable.

(b) Certain sizes outside the minimum range may be supplied by special arrangement only.

4. GROOTTES/SIZES
(VERVOLG/CONTINUED)
SHEET SIZES (CONTINUED)

4.2 DIKTE
4.2.1 Massa - Dikte-omsetting:

4.2 THICKNESS
4.2.1 Mass - Thickness conversion

DIKTE IN mm	NOMINALE MASSA ($kg/100m^2$)	DIKTE IN mm	NOMINALE MASSA ($kg/100m^2$)
THICKNESS IN mm	NOMINAL MASS ($kg/100m^2$)	THICKNESS IN mm	NOMINAL MASS ($kg/100m^2$)
0,19	149,15	0,28	219,80
0,21	164,85	0,30	235,50
0,22	172,70	0,31	243,35
0,23	180,55	0,33	259,05
0,25	196,25	0,35	274,75
0,26	204,10	0,38	298,30

4.2.2 Bepaling van Dikte
4.2.2.1 Vir gesnyde lengtes of rolle wat na LENGTES GESNY WORD.

(a) Behalwe wanneer die wisseling in dikte van 'n enkele plaat bepaal word (sien Klousule (b) hieronder), word dikte bepaal deur 'n plaat te weeg, die oppervlakte te bepaal en dan die formule in Klousule (c) hieronder toe te pas. Die massa van die plaat moet tot die naaste 2g en die mate van die plaat tot die naaste 0,5 mm bepaal word. Die dikte moet tot die naaste 0,001 mm bepaal word.

(b) Om die verskil in dikte van 'n enkele monsterplaat te bepaal, moet die dikte van elk van die monsters bepaal word deur hulle te weeg, die oppervlakte te meet, en dan die formule in Klousule (c) hieronder verstrek, toe te pas. Die massa van die monsters moet bepaal word tot die naaste 0,01g of nader, en die mate van die monsters moet gemeet word tot die naaste 0,1 mm. Die dikte moet bepaal word tot die naaste 0,001 mm.

(c) Dikte moet bereken word deur toepassing van die volgende formule:-

$$\text{Dikte (mm)} = \frac{\text{massa (g)}}{\text{werklike oppervlakte } (cm^2) \times 0{,}785}$$

(d) Plasing van die toetsmonsters waarna in (b) verwys word, vir die bepaling van lokale diktes van 'n tinplaat.

4.2.2 Determination of thickness
4.2.2.1 For cut lengths or coils to be CUT TO LENGTHS.

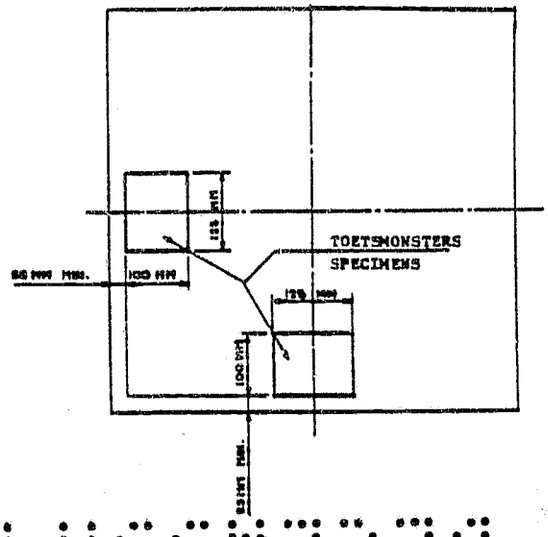
(a) Except when determining the variation within a sheet (see Clause (b) below), thickness is determined by weighing a whole sheet, measuring the area and applying the formula given in Clause (c) below. The mass of the sheet should be determined to a precision of 2g and the dimensions of the sheet should be measured to a precision of 0,5 mm. The thickness should be stated to the nearest 0,001 mm.

(b) For determining the variation of thickness within an individual sheet, the thickness of each of the specimens should be determined by weighing the speciman, measuring the area and applying the formula given in Clause (c) below. The mass of the specimens should be determined to a precision of 0,01g or better, and the dimensions of the specimens should be measured to a precision of 0,1 mm. The thickness should be stated to the nearest 0,001 mm.

(c) Thickness should be calculated by applying the following formula:-

$$\text{thickness (mm)} = \frac{\text{mass (g)}}{\text{actual area } (cm^2) \times 0{,}785}$$

(d) Location of the test specimens referred to in (b) for the determination of local thicknesses within a tinplate sheet.



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6. GROOTTES/SIZES
(VERVOLG/CONTINUED)

4.2.2.2 Vir Tinplaatrolle wat direk vir die eindgebruik vervaardig sal word D.I. Sonder die tussenstap van sny na lengtes of van tinplaatrolle wat na smalbandrolle GESTROOKSNY WORD Wanneer die koper verlang om toetse te doen om te bepaal of die vereistes in ooreenstemming is met die spesifikasie vir die dikte van 'n item in 'n spesifieke besending van gewalste tinprodukte in rolle met dieselfde bestelde spesifikasie sal die volgende prosedure gebruik word:
Toevallige en verteenwoordigende metings deur die gebruik van 'n handmikrometer moet dwarsdeur die rollengte gedoen word.
Metings mag by enige ligging oor die wydte van die rol gemaak word behalwe 10 mm van die kant af.
Dit word veronderstel dat die handmikrometer tot ±0,003 mm akkuraat is. Geen metings mag binne 1,0 m van 'n sweislas gemaak word nie.

4.2.2.2 For Tinplate coils to be processed directly to the final end-use i.e. without the intermediate step of cutting to sheet lengths, or for tinplate coils to be slit into SLIT COILS
When the purchaser wishes to make tests to ascertain compliance with the requirements of the specification for thickness of an item in a specific shipment of tin mill products in coils having the same order specification, the following procedure shall be used:

Random and representative measurements using a hand micrometer must be made throughout the coil length.

Measurements may be made at any location across the coil width except 10 mm from the edge. The hand micrometers are assumed to be accurate to ± 0,003 mm. No measurements are to be made within 1,0 m of a weld.

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ELEKTROLITIESE TINPLAAT — ELECTROLYTIC TINPLATE

5. DEKLAAG / COATING

Elektrolitiese Tinplaat word met verskeie tindeklae gelewer om aan te pas by die eindgebruik van die tinplaat. Die deklae word uitgedruk as gram per vierkante meter of deur die gebruik van kode-letters, soos hieronder aangedui:-

Electrolytic Tinplate is supplied with various tin coatings to suit the end use of the tinplate. The coatings are expressed as grammes per square metre or by use of code letters, as shown below:-

DEKLAAGMASSA COATING MASS (g/m^2)	AANWYSING OF KODE DESIGNATION OR CODE	AANWENDINGS APPLICATIONS (SLEGS AS ALGEMENE LEIDRAAD) (FOR BROAD GUIDANCE ONLY)
2,8	EF	Geskik vir verfhouers, oliehouers, kroondoppies algemene gebruike waar streng korrosiewerende eienskappe nie vereis word nie./Suitable for paint containers, oil containers, crowncorks, general line purposes where strict anti-corrosive properties are not required.
5,6	E1	Gebruik vir botteldoppies, entstukke en lakverniste/gelitografeerde rompe. Geskik vir houers waar lae tot matige korrosieweerstand vereis word./Used for bottletops, ends and lacquered/lithographed bodies. Suitable for containers where low to mild corrosion resistance is required.
11,2	E2	Geskik vir nie-lakverniste entstukke en rompe waar matige korrosieweerstand vereis word./Suitable for unlacquered containers where mild corrosion resistance is required.
16,8	E3	Geskik vir melkprodukhouers en nie-lakverniste houers waar matige tot medium korrosieweerstand vereis word./Suitable for milk product containers and unlacquered containers where mild to medium corrosion resistance is required.
22,4	E4	Geskik vir sekere nie-lakverniste houers ter vervanging van warmgedompelde tinplaat waar 'n medium-hoëkorrosieweerstand vereis word./Suitable for certain unlacquered containers in substitution for hot-dipped tinplate where a medium-high corrosion resistance is required.
30,2	E5	Swaarste tindeklaag beskikbaar/Heaviest tincoating available.

OPMERKING: E4 word met paralelle lyne, 76 mm vanmekaar, op een oppervlak gemerk om uitkenning te vergemaklik.

NOTE: E4 is marked with parallel lines, 76 mm apart, on one surface for easy identification.

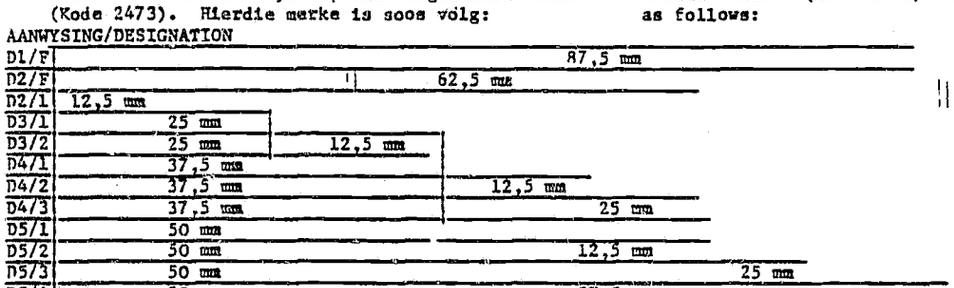
Tinplaat met gedifferensieerde deklae is Elektrolitiese Tinplaat wat verskillende deklaagmassa aan elke kant het en is beskikbaar in die volgende kombinasies:-

Differentially coated tinplate is Electrolytic Tinplate having a different coating mass on each side and is available in the following combinations:-

AANWYSING OF KODE/DESIGNATION OR CODE					
D1/F	D2/1	D3/2	D4/2	D5/1	D5/3
D2/F	D3/1	D4/1	D4/3	D5/2	D5/4

Tinplaat met gedifferensieerde deklae is normaalweg met deurlopende lyne gemerk aan die "swaarbedekte" kant. Indien gespesifiseer, kan tinplaat met gedifferensieerde deklae, gemerk word met onderbroke lyne op die "Ligbedekte kant. (Kode 2473). Hierdie merke is soos volg:

Differentially coated tinplate is normally marked with continuous lines on the "heavy coated" side. If specified differentially coated tinplate can be marked with intermittent lines on the "Lighter Coated" side. (Code 2473) These lines are spaced as follows:



OPMERKING: Matafgewerkte tinplaat met gedifferensieerde deklae kan nie gemerk word nie maar sal sal verpak word met die "Swaarbedekte" kant na bo. Tinplaat met gedifferensieerde deklae word normaalweg verpak met die gemerkte kant na bo. Indien gespesifiseer, kan tinplaat met gedifferensieerde deklae verpak word met die "gemerkte kant" na onder. (Kode 2512)

NOTE: Differentially coated matt finished tinplate cannot be marked but will be packed "Heavy Coated" side uppermost. Differentially coated Tinplate is normally packed with the marked side uppermost. If specified, differentially coated tinplate can be packed with the "marked side" face down. (Code 2512)

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ELEKTROLITIESE TINPLAAT — TOLERANSIES/TOLERANCES — ELECTROLYTIC TINPLATE

6.1.1 GESNYDE LENGTES

(a) Die dikte van elke plaat, soos aangedui in klousule 4.2 moet gemeet word soos beskryf in klousule 4.2.2.1 (Verwys bladsy S3.) Die gemiddelde dikte van 'n besending word verteenwoordig deur die rekenkundige gemiddelde van al die monsterplate wat getoets is.

(b) Die waarde van die rekenkundige gemiddelde behoort nie van die nominale dikte af te wyk
- met meer as ± 2,5% vir 'n besending van meer as 20 000 plate nie;
- met meer as ± 4% vir 'n besending van 1 500 tot en met 20 000 plate nie;
- met meer as + 6 - 4% vir 'n besending van 100 tot minder as 1 500 plate nie.

(c) Toleransies op nominale dikte van individuele plate
Geen plaat van dié geselekteer en gemeet, soos in klousule 4.2.2.1 beskryf, behoort met meer as ± 8,5% van die nominale dikte af te wyk nie.

6.1.2 Vir tinplaat wat in ROLLE OF GESTROOKSNY NA ROLLE GEBRUIK WORD
Geen rolle (van die geselekteer en gemeet, soos in klousule 4.2.2.2 beskryf) behoort met meer as ± 8,5% van die nominale dikte af te wyk nie.

6.2 GROOTTE-AFMETINGS

6.2.1 Tinplaat

(a) Bepaling van liniêre afmetings
Die afmetings behoort op 'n monsterplaat wat op 'n plat oppervlak geplaas word, gemeet te word. Die meting van lengte en wydte tot die naaste 0,5 mm behoort oor die middel van die plaat te geskied.

(b) Plaatgrootte
Elke plaat behoort sodanig te wees dat 'n reghoek van die bestelde afmetings daarin beskikbaar is.

(c) Toleransies op liniêre afmetings
Elke plaat in die monster behoort nie kleiner as die bestelde afmetings te wees nie. Normaalweg behoort geen plaat die afmetings met meer as 3 mm te oorskry nie, en onder geen omstandighede behoort die plaat die bestelde afmetings met meer as 5 mm te oorskry nie.

6.2.2 Rolle
Rolle word voorsien in die wydte soos bestel. Bepaling van die wydte en wydtetoleransie geskied in ooreenstemming met klousule 6.2.1(a) en (c) hierbo. In die geval van rolle egter, word slegs die wydte-afmeting oorweeg.

6.3 RONDING

6.3.1 Gesnyde lengtes
Ronding is die afwyking van 'n sykant van 'n reguit lyn wat albei ente van die sy raak en is beperk tot 1,5 mm per meter.

6.3.2 Rolle
Ronding is die grootste afstand wat 'n kant afwyk van 'n reguit lyn, waar die afstand gemeet word aan die konkaafkant met gebruikmaking van 'n styfgespanne lyn of rei, en is beperk tot 6 mm per 4 000 mm lengte.

6.1.1 CUT LENGTHS

(a) The thickness of each sheet, as indicated in clause 4.2 should be measured as described in clause 4.2.2.1 (Refer page S3) The average thickness of a consignment is represented by the arithmetic mean of all the specimen sheets tested.

(b) The value of the arithmetic mean should not deviate from the nominal thickness
- by more than ± 2,5% for a consignment of more than 20 000 sheets;
- by more than ± 4% for a consignment of 1 500 up to and including 20 000 sheets;
- by more than + 6 - 4% for a consignment of 100 up to but not including 1 500 sheets.

(c) Tolerances on nominal thickness of individual sheets
No sheet among those selected and measured as described in clause 4.2.2.1 should deviate from the nominal thickness by more than ± 8,5%.

6.1.2 For tinplate to be used IN COILS OR SLIT TO COILS.
No coil (those selected and measured as described in clause 4.2.2.2) should deviate from the nominal thickness by more than ± 8,5%

6.2 SIZE DIMENSIONS

6.2.1 Tinplate Sheets

(a) Determination of linear dimensions
The measurements should be made on a sample sheet being laid on a flat surface. The measurement of length and width to the nearest 0,5 mm should be made across the centre of the sheet.

(b) Size of sheet
Each sheet should be such that a rectangle of the ordered dimensions is available in it.

(c) Tolerances on linear dimensions
Each sheet in the sample should be of not less than the ordered dimensions. Normally no sheet should exceed either dimension by more than 3 mm, and in no circumstances should a sheet exceed the ordered dimension by more than 5 mm.

6.2.2 Coils
Coils are supplied to the width as ordered. Determination of the width and the width tolerance is in accordance with clauses 6.2.1(a) and (c) above. In the case of coils, however, only the width dimension is considered.

6.3 CAMBER

6.3.1 Sheared sheets
Camber is the deviation of a side edge from a straight line touching both ends of the side and is limited to 1,5 mm per metre.

6.3.2 Coils
Camber is the greatest deviation of an edge from a straight line, the measurement being taken on the concave edge using a taut line or straight edge, and is limited to 6 mm per 4 000 mm of length.

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6. TOLERANSIES (VERVOLG)/TOLERANCES (CONTINUED)

6.4 NIE-HAAKSHEID
Dit is die afwyking van 'n entrand van 'n reguit lyn wat reghoekig met die kant van die plaat geplaas word, wat aan die een hoek raak en strek tot die teenoorgestelde kant. Die mate van afwyking is beperk tot 3 mm per 900 mm.

6.4 OUT-OF-SQUARE
This is the deviation of an end edge from a straight line which is placed at right angles to the side of the plate, touching one corner and extending to the opposite side. The amount of deviation is limited to 3 mm per 900 mm.

6.5 DEKLAE
Minimum gemiddelde toetswaarde vir deklaagmassa

6.5 COATINGS
Minimum average coating mass test values

AANWYSING DESIGNATION	DEKLAAGMASSA/COATING MASS (g/m^2)	
	NOMINALE DEKLAAG-MASSA NOMINAL COATING MASS	MIN. GEMIDDELDE TOETS-WAARDE MIN. AVERAGE TEST VALUE
EF	2,8 (1,4/1,4)	2,4
E1	5,6 (2,8/2,8)	4,9
E2	11,2 (5,6/5,6)	10,5
E3	16,8 (8,4/8,4)	15,7
E4	22,4 (11,2/11,2)	20,2
E5	30,2 (15,1/15,1)	26,8
D1/F	2,8/1,4	2,25/1,1
D2/F	5,6/1,4	4,75/1,1
D2/1	5,6/2,8	4,75/2,25
D3/1	8,4/2,8	7,85/2,25
D3/2	8,4/5,6	7,85/4,75
D4/1	11,2/2,8	10,1/2,25
D4/2	11,2/5,6	10,1/4,75
D4/3	11,2/8,4	10,1/7,85
D5/1	15,1/2,8	13,4/2,25
D5/2	15,1/5,6	13,4/4,75
D5/3	15,1/8,4	13,4/7,85
D5/4	15,1/11,2	13,4/10,1

OPMERKING:
Die gemiddelde toetswaarde vir deklaagmassa is die gemiddelde van drie koltoetse oor die dwarste van 'n toetstrook geneem (kant, middel, kant). Die gemiddelde waarde van alle koltoetse op die toetstroke van enige item van 'n spesifieke versending verteenwoordig die gemiddelde toetswaarde vir dek laagmassa. Steekproefprosedure is in ooreenstemming met 'A.I.S.I. Steel Products Manual, "Tin Mills Products."'

NOTE:
The average coating mass test value is the mean of three spot tests taken across a test strip (edge, centre edge). The average value of all spot tests on the test strips from any one item of a specific shipment represents the average coating mass test value. Random-sampling procedure is in accordance with 'A.I.S.I. Steel Products Manual, "Tin Mills Products."'

7. AFWERKING/FINISHING

7.1 KOMBINASIES
Verskillende kombinasies van staalbasis en tindeklaagafwerkings is beskikbaar om aan te pas by die eindgebruik van die tinplaat en klante moet op die bestelling aandui watter afwerking vereis word. Hierdie afwerking is soos volg:-

7.1 COMBINATIONS
Various combinations of steel base and tin coating finishes are available to suit the end use of the tinplate and customers should indicate on the order the finish required. The finishes are as follows:-

KODE CODE	AANWYSING DESIGNATION	KOMBINASIE COMBINATION	
		STAALBASIS STEEL BASE	TINDEKLAAG TIN COATING
2680	Gewone Blink/ Ordinary-Bright	Gladde afwerking Smooth finish	Vloeigesmelte Blink/ Flow-melted-bright
2642	Gewone Mat/ Ordinary-Matt	Gladde afwerking/ Smooth finish	Ongesmelt, Dof Unmelted, Dull
2794	Grintblink/ Grit-Bright	Grintafwerking/ Grit finish	Vloeigesmelte Blink/ Flow-melted-bright
2681	Grinmat - Swaar (CLA 100/130 mikroduime) Grit-Matt - Heavy (CLA 100/130 micro inches)	Grintafwerking/ Grit finish	Ongesmelt, Dof Unmelted, Dull
2682	Steenblink/ Stone-bright	Steenafwerking/ Stone finish	Vloeigesmelte Blink/ Flow-melted-bright
3121	Steenmat Stone-Matt	Steenafwerking/ Stone finish	Ongesmelt, Dof/ Unmelted, Dull
	Ander afwerkings op versoek/Other finishes on application		

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ELEKTROLITIESE TINPLAAT — ELECTROLYTIC TINPLATE

7. AFWERKING (VERVOLG) / FINISHING (CONTINUED)

7.2	PASSIVERING	7.2	PASSIVATION
7.2.1	Chemiese Behandeling Ten einde oksidasie van die tindeklaag van elektrolitiese tinplaat te voorkom en nuttige roes- en vlekbestandheidseienskappe daaraan te verlean, kan die volgende behandelings gespesifiseer word:-	7.2.1	Chemical Treatment To prevent oxidation of the tin coating of Electrolytic tinplate and to impart useful rust and stain resisting properties to it the following treatments may be specified:-
(a)	Kode 311:- 'n katodiese natriumdichromaatchemiese behandeling.	(a)	Code 311:- a cathodic, sodium dichromate chemical treatment.
(b)	Kode 300:- 'n natriumdichromaatchemiese behandeling	(b)	Code 300:- a sodium dichromate chemical treatment.
7.2.2	Olieaanwending Na die chemiese behandeling word 'n dun laagie dioktielsebasaat-olie met 'n additief, elektro-statis op die tinplaat aangebring om skeiding van die tinplaatvelle, wanneer hulle gestapel is, te vergemaklik.	7.2.2	Oiling After chemical treatment a thin film of dioctyl sebacate oil with an additive is electrostatically applied to the tinplate to facilitate easier seperation of the tinplate sheets when stacked.
7.3	INSPEKSIE	7.3	INSPECTION
7.	Tinplaat Inspeksie van die materiaal word gedurende verwerking by verskeie punte uitgevoer. Albei kante van die tinplaat word 'in die baan' ondersoek vir oppervlak- en deklaagdefekte.	7.3.1	Tinplate Inspection of the material is carried out at various points during processing. Both sides of the tinplate sheets are examined 'in line' for surface and coating defects.
7.3.2	Rolle Die inspeksie van rolle verskaf nie dieselfde geleentheid om defekte af te keur as in die geval van gesnyde lengtes nie. Defekte gedeeltes sal tot 'n minimum beperk word en die gemiddelde ongesorteerde opbrengs sal nie minder as 95% wees van alle rolle deur klant gedurende een kalender maand geprosesseer nie. 'n Ongesorteerde opbrengs van 88% per individuele rol word gewaarborg borg en indien dit nie verkry word nie, moet die oorblywende gedeelte van sodanige rol sowel as die materiaal gesny van die rol apart gehou word, wat as 'n afsonderlike eis hanteer sal word. Sodanige rol sal nie deel vorm van die bepaling van die gemiddelde ongesorteerde opbrengs vir 'n bepaalde maand nie.	7.3.2	Coils Inspection of coils does not afford the same opportunity to reject defects as in the case of cut lengths. Defective portions will be kept to a minimum and the average unassorted yield will not be less than 95% of all coils processed by customer during one calender month. An unassorted yield of 88% per individual coil is guaranteed and if this is not obtained the remainder of such coil and the material cut from such coil should be kept separately and will be treated as a separate claim. Such coil will not form part in determining the average unassorted yield for a specific month.
7.4	KLASSIFIKASIE Voltooide tinplaat word as volg gesorteer en geklassifiseer:-	7.4	CLASSIFICATION Finished tinplate sheets are sorted and classified as follows:-
7.4.1	Ongesorteer Tinplaat wat -	7.4.1	Unassorted Tinplate sheets which are -
(i)	binne groottetoleransies is;	(i)	within size tolerances;
(ii)	sonder speldgate is; en	(ii)	free from pin-holes; and
(iii)	slegs 'in-die-baan' geinspekteer is. Defektiewe tinplate word verwyder, primas en tweedes word aanvaar as 'n gemengde hoeveelheid.	(iii)	'line inspected'only. Defective tinplate sheets are removed and primes and seconds accepted as a mixed lot.

OPMERKINGS:

Primas is tinplate wat vry is van defekte wat met die blote oog geredelik sigbaar is.

Tweedes is tinplaat wat effens of gedeeltelik defek is, maar wat bruikbaar of gedeeltelik bruikbaar is. Tweedes behoort nie 15 persent van 'n volledige bestelling te oorskry nie.

NOTES:

Primes are tinplate sheets which are free from defects readily visible to the unaided eye.

Seconds are tinplate sheets which may be slightly or partly defective but which are usable or partly usable. Seconds should not exceed 15 per cent of a complete order.

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8. VERPAKKING/MERKING/PACKING/MARKING

8.1 VERPAKKING

8.1.1 Tinplaat

Tinplaat word verpak in veelpakket-eenhede en geplaas op houtplatforms of laaiborde met 2 of 3 lopers, afhangende van die grootte van die plaat. Die tinplaat word beskerm met karton, waterdigte papier, hoeksteunstukke en randbeskermers en word met staalhoepels vasgemaak.

8.1.2 Rolle

Rolle word voorsien tot 'n maksimum massa van 10 ton met 'n binnediameter van 420 mm (2591) Die materiaal word op geskikte wyse beskerm met karton en vogwerende papier volgens werke se keuse.

Rolle word soos volg voorsien:-

(a) Gepak met die kern vertikaal op 'n platform. Wanneer op hierdie wyse bestel moet geskikte reëlings met die Korporasie getref word betreffende die terugsending van platforms.

(b) Gepak met die kern horisontaal op houbare wiegstukke. Die Korporasie aanvaar geen verantwoordelikheid vir skade, soos tordeermerke, wanneer op hierdie wyse versend.

8. MERKING

8.2.1. Elke laaipakket of rol word gemerk met die bestellingnommer en het 'n aanplaketiket waarop die graad, deklaagmassakode, diktemaat, en in die geval van tinplate, die lengte en getal, aangedui word, en in die geval van rolle, die aantal sitoa wat die rol bevat.

8.2.2 Laaipakkette wat tinplaat bevat met 'n ander afwerking as gewone blink, word dienooreenkomstig gemerk.

8.2.3 Elke laaipakket of rol het 'n kontrolekaart wat 'n presiese weergawe is van die etiket in 8.2.1 vermeld, en wat deur die klant gehou en in die geval van enige klag in verband met die materiaal, voorgelê moet word.

8.1 PACKING

8.1.1 Tinplate

Tinplate sheets are packed in multi-package stillages mounted on wooden platforms or pallets on 2 or 3 runners depending on the size of the plate. The tinplate sheets are protected with cardboard, waterproof paper, angle brackets and edge protectors, and secured by means of steel strapping.

8.1.2 Coils

Coils are supplied to a maximum mass of 10 tons with an inside diameter of 420 mm (2591) The material is suitably protected by cardboard and moisture barrier paper at Works option.

Coils can be supplied as follows:

(a) Packed on a platform with the core vertical. When ordered in this manner suitable arrangement to be made with the Corporation regarding the return of platforms.

(b) Packed on non-returnable cradles with the core horizontal. The Corporation accepts no responsibility for damage such as hickey marks when dispatched in this manner.

8.2 MARKING

8.2.1 Each stillage or coil is marked with the order number and has a stick-on label showing the grade, coating mass code, thickness, and in the case of sheets, the length and number of tinplate sheets, and in the case of coils the number of sitas contained in the coil.

8.2.2 Stillages containing tinplate with a finish other than ordinary-bright are marked accordingly.

8.2.3 Each stillage or coil has a tally card which is an exact replica of the label, reffered to in 8.2.1 and which should be retained by the customer and produced in the event of any complaint in connection with the material.

9. OORMAAT OF ONDERMAAT/OVERAGE OR UNDERAGE

9.1 Vir elke item van 'n bestelling behou ons ons die reg voor om materiaal te voorsien binne die toleransies soos hieronder aangedui:-

9.1 For each item of an order we reseve the right to supply within the tolerances given below:-

MASSA VAN BESTELDE ITEMS OF DIE BEREKENDE MASSA VAN DIE AANTAL PLATE BESTEL MASS OR ITEMS ORDERED OR THE CALCULATED MASS OF THE NUMBER OF SHEETS ORDERED	OORMAAT/ONDERMAAT/ OVERAGE/UNDERAGE
(TON(S))	%
≤ 2	30
≥ 2 - 5	25
> 5 - 10	20
> 10 - 20	15
> 20 - 50	10
> 50 - 100	7½
> 100	5

Vir beperking of bogenoemde toleransies - verwys bladsy P1, par. 2.2

For restrictions on the above tolerances - refer page P1, par. 2.2

10. SEILE/TARPAULINS

Alle materiaal versend deur die Werke sal deur seile bedek wees tydens versending.

All material dispatched by the Works will be covered by tarpaulins during transit.

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S.P.E. 220

YSKOR BEPERK ISCOR LIMITED

KNUPPELS, VOORBLOKKE EN PLATBLOKKE

(DIVERSE HALFPRODUKTE)

BILLETS, BLOOMS AND SLABS

(MISCELLANEOUS SEMIS)

DECLASSIFIED

DECLASSIFIED

KNUPPELS, VOORBLOKKE EN PLATBLOKKE

BILLETS, BLOOMS AND SLABS

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0310590

ALGEMEEN/GENERAL

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffenings-afslag van 2½%, mits betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

3. Alle items is onderworpe aan 'n versendingstolerans (Verwys bladsye P1 en S2)

4. Alle pryse en ekstras hierin kwoteer is per metrieke ton (1000kg). Enige verwysing na na die getal lengtes op die faktuur of vragbrief is slegs vir inligting.

5. Normale inspeksie en toetsing word uitgevoer en is ingesluit by die spesifikasie ekstra. Wanneer inspeksie en bywoning van toetse deur die kliant of sy verteenwoordiger vereis word sal die ekstras soos uiteengesit op Bladsy P2 gehef word.

6. Pryse en ekstras is die wat op die versendings-datum geld en is onderworpe aan verandering sonder kennisgewing.

7. Yskor behou die reg voor om produkte te voorsien vanaf die Werke van sy keuse

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. All items are subject to a dispatch tolerance (Refer pages P1 and S2)

4. All prices and extras quoted are per metric ton (1000kg). Any reference to the number of lenghts on the invoice or consignment note is for information only.

5. Normal inspection and testing is carried out and is included in the specification extra. When inspection and witnessing of tests is required by the customer or his representative, the extras charged are as outlined on Page P2.

6. Prices and extras are those ruling on date of dispatch, and are subject to change without notice.

7. Iscor reserves the right to supply material from the Works of its choice.

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KNUPPELS, VOORBLOKKE EN PLATBLOKKE

A. KONTROLELYS VIR PLASING VAN BESTELLINGS EN NAVRAE

1. ALGEMEEN

(a) Bestemming

(i) Posadres

LET WEL: Toets en analisesertifikate word na hierdie adres gestuur tensy uitdruklik anders versoek.

(ii) Afleweringsadres

b) Aflewering verlang

(i) Datum

(ii) Spoorvervoer

(iii) Padvervoer

2. PRODUK

(a) Beskrywing

(b) Nominale afmetings

(i) Dikte

(ii) Wydte

(iii) Lengte

(c) Hoeveelheid (ton)
- Totale massa van elke item

(d) Kwaliteit

(e) *Inspeksie verlang - spesifiseer

(f) Sertifisering - tipe sertifikate

(g) Eindgebruike - spesifiseer

(h) Verpakking verlang

*Kontrak no. moet gespesifiseer word ingeval van S.A.S.-inspeksie

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidekstra per item
3. Beperking op standaard versendingstolerans
4. Grootte ekstras
5. Kwaliteitekstras
6. Inspeksie-ekstras
7. Verwerkingekstras
8. Ultrasoniese toetse
9. Invoerheffing (R10,25/ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark Vereeniging, Westonaria en Wonderboom.

BILLETS, BLOOMS AND SLABS

A. CHECK LIST FOR ORDERING AND ENQUIRIES

1. GENERAL

(a) Destination

(i) Postal Address

NOTE: Test and analysis certificates will be forwarded to this address unless specifically stated otherwise.

(ii) Consignment Address

(b) Delivery required

(i) Date

(ii) Rail Transport.

(iii) Road Transport

2. PRODUCT

(a) Description

(b) Nominal dimensions

(i) Thickness

(ii) Width

(iii) Length

(c) Quantity (tons)
- Total mass of each item

(d) Quality

(e) *Inspection required - specify

(f) Certification - type of certificates

(g) End Uses - specify

(h) Packing required

*Contract no. to be specified in case of S.A.R.-inspection

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extra per item
3. Limitation on standard dispatch tolerance
4. Size extras
5. Quality extras
6. Inspection extras
7. Processing extras
8. Ultrasonic testing
9. Import levy (R10,25/ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

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KNUPPELS, VOORBLOKKE EN PLATBLOKKE BILLETS, BLOOMS AND SLABS

A. PRYSE/PRICES

1.0 **BASISPRYS** 1.0 **BASIS PRICE**

1.1 PWV* - gebied: v.o.s. Yskorwerke, Pretoria (Sylyn 1143, Cordelfos) plus vervoerkoste.

1.1 PWV* area: f.o.r. Iscor Works, Pretoria/ (siding 1143 Cordelfos) plus transport costs.

1.2 Buite PWV[1] -gebied: v.o.s. Germiston plus vervoerkoste

1.2 Outside PWV* area; f.o.r. Germiston plus transport costs.

*) Verwys Kontrolelys bladsy I2 paragraaf C

* Refer Check List page I2 paragraph C

PRODUK / PRODUCT		BASISPRYS/BASIS PRICE (Rand)
Knuppels	Billets	R368-00
Voorblokke	Blooms	R368-00
Platblokke	Slabs	R383-50

2.0 **HOEVEELHEIDEKSTRA PER ITEM**

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2.0 **QUANTITY EXTRA PER ITEM**

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

ITEM TON(S)	EKSTRA/EXTRA (Rand)
5 - < 10	32-25
10 - < 20	20-40
20 - < 40	8-15
40 - < 80	3-20
⩾ 80	0-00

3.0 **BEPERKINGEKSTRA OP STANDAARD VERSENDING/TOLERANS** (Verwys bladsy S2, par. 7)

(i) 50% van standaard ..... R 6-70

(ii) Wanneer 2½% versendingtolerans gespesifiseer word ..... R13-40 (Slegs van toepassing op items onder 100 ton).

3.0 **RESTRICTION EXTRA ON STANDARD DISPATCH TOLERANCE** (Refer page S2, par. 7)

(i) 50% limitation on standard R6-70

(ii) When 2½% overage or underage of item mass is specified..... R13-40 (Applicable only to items under 100 tons).

4.0 **GROOTTE-EKSTRAS**

Die volgende grootte-ekstras is van toepassing op standaard kwaliteite.

4.0 **SIZE EXTRAS**

The following size extras are applicable to standard qualities.

4.1 **Knuppels en Voorblokke**

4.1 **Billets and Blooms**

KNUPPELS/BILLETS			VOORBLOKKE/BLOOMS		
GROOTTE SIZE (mm)	NOMINALE MASSA NOMINAL MASS (kg/m)	EKSTRA/ EXTRA R.c.	GROOTTE SIZE (mm)	NOMINALE MASSA NOMINAL MASS (kg/m)	EKSTRA/ EXTRA (Rand)
92	65,8	32-45	150	174	19-55
100	76,9	32-45	170	224	0-00
112,5	97,6	32-45	191	284	0-00
130	130	32-45	200	308	0-00
			230	407	19-55
			250	481	19-55
			300	692	19-55
			380	1110	(op navraag/ on enquiry)

4.2 **Platblokke**

4.2 **Slabs**

WYDTE/ WIDTH (mm)	DIKTE/THICKNESS (mm)								
	75	90	105	120	135	150	165	180	195
	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.	R.c.
150	59-60	44-60	29-95	29-95	29-95	-	-	-	-
180	59-60	44-60	29-95	29-95	29-95	-	-	-	-
210	44-60	29-95	29-95	29-95	12-10	-	-	-	-
240	44-60	29-95	29-95	12-10	12-10	-	-	-	-
270	29-95	29-95	12-10	12-10	12-10	0-00	-	-	-
300	29-95	29-95	12-10	12-10	12-10	29-95	-	-	-
330	-	-	12-10	12-10	29-95	29-95	29-95	29-95	29-95
360	-	-	12-10	29-95	29-95	29-95	29-95	29-95	29-95
390	-	-	12-10	29-95	29-95	29-95	29-95	-	-
420	-	-	29-95	29-95	29-95	29-95	29-95	-	-
450	-	-	29-95	29-95	29-95	29-95	-	-	-
480	-	-	29-95	29-95	29-95	29-95	-	-	-
510	-	-	29-95	29-95	29-95	29-95	-	-	-

5. KWALITEITSEKSTRAS

5.1 Treksterktetoetse kan aangebied word slegs tot 'n maksimum deursnee van 41 300 mm^2. Vir groottes bo hierdie dwarsdeursnee, word die materiaal slegs volgens analise verkoop.

5.2 * Sagtestaalsmeekwaliteit R20-00

5.3 BS-Spesifikasies (insluitende Elektro- en Suurstofgeblaasde Staal):-

(a) BS 4360/1972 Grade 43A R35-75

(b) BS 970/1972 Part 1 (soos gevals)

(i) 080M40 (0,36/0,44%C) R46-25
(ii) 070M55 (0,50/0,60%C) R53-75
(iii) 070M20 (0,16/0,24%C) R38-00

5.4 S.A.S./C.M.E. 9-1979 °
(Insluitend wysigings tot op datum maar nie hittebehandel nie)

(a) Simbool 8
(430/510 MPa) R43-75

#(b) Simbool 3
(495/585 MPa) R62-00

#(c) Simbool 2
(620/695 MPa) R62-00

(d) Simbool 7 ..... R43-75

#'n Gewysigde buigtoets met 'n profiel van 25 mm x 19 mm gebuig om 'n radius van 25 mm vir Simbool 2 en gebuig om 'n radius van 16 mm vir Simbool 3, word uitgevoer.

5.5 Koolstofstaal binne die volgende Koolstofgehalteperke en met 'n Maksimum Mangaaninhoud van 0,9%:-

(a) 0,35/0,45%C R47-25
(b) 0,40/0,50%C R52-00
(c) 0,55/0,70%C R56-50

5.6 Yskor se Spesiale Smeekwaliteit (Y.S.S.) R77-75

5.7 Yskor-Treksterkteperke 540/695 MPa R47-25

5.8 Ander Kwaliteite .....Op navraag

°Indien slegs chemiese analises en meganiese eienskappe vereis word - Aftrekking..... R8-00

*Sagtestaalsmeekwaliteit word nie aanbeveel vir kritiese aanwendings nie, omdat dit meer as die normale hoeveelheid nie-metaal insluitsels kan hê.

6.0 INSPEKSIE-EKSTRAS

6.1 Bywoning van meganiese toetsing deur klant of sy verteenwoordiger .. R5-00
Vir elke bykomende instansie wat meganiese toetsing bywoon R9-00

6.2 Inspeksie van produkte, deur klant of sy verteenwoordiger R9-00
Vir elke bykomende instansie wat produkte inspekteer R18-00

6.3 Bywoning van ultrasoniesetoetsing deur klant of sy verteenwoordiger.
..... Op navraag

5. QUALITY EXTRAS

5.1 Tensile tests can be offered only up to a maximum cross section of 41 300 mm^2. For sizes above this cross section the material is sold on analysis only.

5.2 * Mild Steel Forging Quality R20-00

5.3 BS Specifications, (including Electric and Oxygen-blown Steel):-

(a) BS 4360/1972 Grade 43A R35-75

(b) BS 970/1972 Part 1 (as rolled)

(i) 080M40 (0,36/0,44%C) R46-25
(ii) 070M55 (0,50/0,60%C) R53-75
(iii) 070M20 (0,16/0,24%C) R38-00

5.4 S.A.R/C.M.E. 9-1979 °
(Including revisions up to date but not heattreated)

(a) Symbol 8
(430/510 MPa)..... R43-75

#(b) Symbol 3
(495/585 MPa..... R62-00

#(c) Symbol 2
(620/695 MPa)..... R62-00

(d) Symbol 7..... R43-75

#A modified bend test with a 25 mm x 19 mm, section bent round a radius of 25 mm is carried out for Symbol 2 and round a radius of 16 mm for Symbol 3.

5.5 Carbon Steels to the following ranges of Carbon and with a Maximum Manganese content of 0,9%:

(a) 0,35/0,45%C..... R47-25
(b) 0,40/0,50%C..... R52-00
(c) 0,55/0,70%C R56-50

5.6 Iscor Special Forging Quality (I.S.F.) R77-75

5.7 Iscor Tensile Range 540/695 MPa R47-25

5.8 Other Qualities .....On enquiry

°If chemical analysis and mechanical properties only required - Deduction..... R8-00

*Mild Steel Forging Quality is not recommended for critical applications since it could contain more than the normal amount oif non-metallic inclusions.

6.0 INSPECTION EXTRAS

6.1 Witnessing mechanical testing by customer or his representative R5-00
For each additional authority witnessing mechanical testing R9-00

6.2 Inspection of products by customer or his representative R9-00
For each additional inspecting authority R18-00

6.3 Witnessing of ultrasonic testing by customer or his representative.
..... On enquiry

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KNUPPELS, VOORBLOKKE EN PLATBLOKKE

7.0 VERWERKINGSEKSTRAS

7.1 Spesiale verfmerking) Op navraag

7.2 Koud gesaag) Op navraag

7.3 Wals tot massatoleransie kleiner as die standaard) Op navraag

7.4 SPESIALE VERWERKINGSEKSTRA

Ten einde afvlokking te voorkom sal alle diverse halfprodukte dikker as 152 mm en met 'n koolstof-inhoud van meer as 0,45% ondrworpe wees aan stadige afkoelingsproses, ekstra..... R26-75

7.5 Oppervlakgehalte

Oppervlakgehalte word soos volg gewaarborg:

BILLETS, BLOOMS AND SLABS

7.0 PROCESSING EXTRAS

7.1 Special paint marking) On enquiry

7.2 Cold sawing) On enquiry

7.3 Rolling to mass tolerances smaller than standard) On enquiry

7.4 SPECIAL PROCESSING EXTRAS

In order to avoid flaking all semis over 152 mm thick with a carbon. content of over 0,45% will be subject to a slow cooling process, extra R26-75

7.5 Surface quality

Surface quality is guaranteed as follows:

GRAAD / GRADE	MAKSIMUM TOELAATBARE DEFEKDIEPTE UITGEDRUK AS % VAN DIE NOMINALE GROOTTE MAXIMUM DEFECT DEPTH PERMITTED EXPRESSED AS % OF NOMINAL DIMENSION			KOOLSTOFSTAAL MET SPESIFIKASIE-MAKSIMUM/ CARBON STEEL WITH SPECIFICATION MAX.	
	51 - 100 mm	101 - 200 mm	201 - 300 mm	C ≤ 0,40%	C ≥ 0,40%
A	4%	3%	2%	R33-75	R39-50
B	6%	5%	4%	R0-00	R0-00

(i) Allooistaal ..... Op navraag

(i) Alloy steels ..... On enquiry

8.0 EKSTRA VIR ULTRASONIESE TOETSE

8.1 *Ultrasoniese toetse op knuppels, voorblokke en platblokke tot 'n deursnee van 53 000 mm^2 kan aangebied word volgens "yskor standaard **PQA-013 (nuutste hersiening) in die volgende graderings:

Klas I ..... Op navraag
Klas II R43-00
Klas III R27-25

*Ultrasoniese toetse slegs beskikbaar by Pretoriawerke

**Op versoek beskikbaar

8.0 EXTRA FOR ULTRASONIC TESTS

8.1 *Ultrasonic testing on billets, blooms and slabs up to a cross sectional area of 53 000 mm^2 according to "ISCOR'S CODE OF **PQA-013 (latest revision) can be offered according to the following gradings:

Class I..... On enquiry
Class II R43-00
Class III R27-25

*Ultrasonic testing only available from Pretoria Works

**Available on request

SPESIFIKASIES/SPECIFICATIONS

1.0 ALGEMEEN

1.1 Spesifikasies waarvolgens produkte voorsien word word op bladsy P2 aangetoon. Chemiese samestellings waarna verwys word is altyd gietpotanalise en produkanalise is onderhewig aan afwykings volgens aanvaarde internasionale standaarde.

1.2 Produkte word slegs volgens gietpot analise voorsien. Indien deur die spesifikasie gespesifiseer kan meganiese eienskappe voorsien word mits die dwarsdeursnee nie 41300 mm^2 oorskry nie.* Klantbestellings moet duidelik spesifiseer indien meganiese eienskappe verlang word.

* Nie van toepassing op Newcastleprodukte nie.

1.3 Bepaalde meganiese eienskappe t.o.v. sekondêre produkte wat uit hierdie produkte geproduseer word, kan nie gewaarborg word nie, omdat die eienskappe bepaal word deur verdere verwerking en hittebehandelings tegnieke waaroor Yskor geen beheer het nie.

1.0 GENERAL

1.1 Specifications to which products are supplied are listed on page P2. Chemical compositions referred to are always ladle analysis and product analysis is subject to deviations in accordance with accepted international standards.

1.2 Products are normally supplied to ladle analysis requirements only.
If called for by the specification mechanical properties can be supplied provided the cross section does not exceed 41300 mm^2.*Orders should clearly state whether mechanical properties are required.
*Not applicable on products from Newcastle.

1.3 No guarantee is given that specific mechanical properties on secondary products produced from these products will be obtained, since this will depend on further processing and heat treatment techniques beyond our control.

2.0 Interne gaafheid

Klagtes oor poreusheid en sekondêre pyp vir materiaal met 'n dwarsdeursnee groter as 53000 mm^2 sal nie ondersoek en aanvaar word nie.

Klante wat voor- en platblokke verlang met dwarsdeursnee-oppervlaktes meer as 53000 mm^2 waarvan die interne gaafheid gewaarborg moet wees, moet die materiaal vanaf die Smeepers bestel volgens S.P.E.225

2.0 Internal Soundness

Complaints of porosity and secondary pipe will not be entertained on material with cross sectional areas in excess of 53000 mm^2.

Customers who require quaranteed internally sound material on blooms and slabs with cross-sectional areas exceeding 53000 mm^2 should order this material from the Forge Press against S.P.E.225.

3.0 Oppervlakgehalte

Hierdie produkte mag sekere oppervlakgebreke hê tot die vlak toegelaat onder oppervlakgrade A en B soos vervat op bladsy P3 paragraaf 7.5. Oorskryding van die waardes t.o.v. oppervlakgebreke mag deur die vervaardiger deur beitseling of enige ander geskikte metode volgens ASTM A711-74 verwyder word.

3.0 Surface quality

These products may contain surface defects up to the levels permitted under surface Grades A and B as quoted on page P3 paragraph 7.5. Surface defects in excess of these values may be removed by the supplier, chipping or any suitable method, in terms of ASTM A711-74.

4.0 Groottes

Die grootteraeks wat normaalweg geproduseer word, word in tabelle 4.1 en 4.2 op bladsy P1 van hierdie SPE weergegee. Ander groottes .....op navraag

Vir platblokke met 'n massa 2,75 ton vir een lengte mag die deursnee oppervlakte nie groter as 60000 mm^2 wees nie.

4.0 Sizes

The range of sizes normally produced are listed under tables 4.1 and 4.2 on page P1 of this S.P.E. Other sizes ..... on enquiry

For slabs with a mass 2,75 tons for one length the cross-sectional area is not to exceed 60000 mm^2.

YSKOR BEPERK ISCOR LIMITED

KNUPPELS, VOORBLOKKE EN PLATBLOKKE
ALGEMEEN vervolg

5.0 Lengtes

5.1 Knuppels

(i) ⩽ 76 mm .....5 - 9* m in trappe van 1 m
(ii) > 76 mm -< 150 mm.....6 - 13m** in trappe van 1 m

** tot 17,2m .....op navraag
* Klante moet bereid wees om tot 5% volgens massa as deel van elke item in toevallige kortlengtes van 1,5m tot di lengte bestel, te neem.

5.2 Voorblokke ⩾ 150 mm en Platblokke

(i) Pretoriawerke
Slegs toevallige lengtes kan gelewer word vanaf 2 meter tot die lengte deur die klant gespesifiseer met 'n maksimum van 13m.
Tot 15% van item massa mag voorsien word in toevallige kort lengtes vanaf 0,5 meter tot 2 meter

(ii) Newcastlewerke
Voorblokke (150-200mm) word gelewer vanaf 5-11 m in trappe van 1 m. Tot 5% toevallige kortlengtes van 1,5 m tot lengte bestel mag voorsien word.

Platblokke ..... op navraag
5.3 Ander lengtes ..... op navraag

6.0 TOLERANSIES

6.1 Toelaatbare afwyking vanaf nominale massa per meter is ± 4%
6.2 Lengtetolerans is....-0 + 150mm

6.3 Dimensionaletolerans ..... op navraag

7.0 STANDAARD VERSENDINGTOLERANSE

7.1 Ten opsigte van elke item behou Yskor hom die reg voor om te lewer binne die toleranse hieronder gespesifiseer en die item as afgehandel te beskou.

GILLETS, BLOOMS AND SLABS
GENERAL continued

5.0 Lengths

5.1 Billets

(i) ⩽ 76 mm ..... 5 - 9* in steps of 1 m.
(ii) > 76 mm - <150 mm.....6 - 13m** in steps of 1 m.

** up to 17,2m ..... on enquiry.
* Customers must be prepared to take up to 5% by mass as part of each item in random short lengths from 1,5 m up to the length ordered.

5.2 Blooms ⩾150 mm and Slabs

(i) Pretoria Works
Only random lengths from 2 meter up to the length specified are supplied. Maximum length is 13m.
Up to 15% of mass of each item may be supplied in random short lengths from 0,5 meters up to 2 meters.

(ii) Newcastle Works
Blooms (150-200mm) are supplied in lengths from 5-11 m in steps of 1 m. 5% Random short lengths from 1,5m to ordered length may be supplied.

Slabs .....on enquiry
5.3 Other lengths .....on enquiry

6.0 TOLERANCES

6.1 Permissible variation from the nominal mass per metre is ± 4%
6.2 Length tolerance is ....-0 +150mm

6.3 Dimensional tolerance ... ..on enquiry

7.0 STANDARD DISPATCH TOLERANCES

7.1 In respect of each item, Iscor reserves the right to supply within the tolerances specified below and to consider the item complete.

MASSA VAN BESTELDE ITEM/ MASS OF ITEM ORDERED	
TON / TONS	VERSENDINGSTOLERANS/ DISPATCH TOLERANCE
6 - 12	± 30%
> 12 - 24	± 20%
> 24 - 50	± 10%
> 50 - 100	± 7,5%
>100	± 5%

NOTA: Vir beperkings op standaard versending-toleransverwys bladsy P1, par. 3.0

NOTE: For restrictions on standard dispatch tolerance refer page P1, par. 3.0/

UNCONTROLLED

S.P.E. 225

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YSKOR BEPERK ISCOR LIMITED

SMEESTUKKE
VORM- EN RUGESMEDE PARALELLE RONDSTAWE EN RUGESMEDE VIERKANTSTAWE

FORGINGS
SWAGED AND ROUGH FORGED PARALLEL ROUND BARS AND ROUGH FORGED SQUARE BARS

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VORM- EN RUGSMEDE PARALELLE RONDSTAWE EN RUGSMEDE VIERKANTSTAWE

SWAGED AND ROUGH FORGED PARALLEL ROUND BARS AND ROUGH FORGED SQUARE BARS

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VORM- EN RUGESMEDE PARALLELE RONDSTAWE EN RUGESMEDE VIERKANTSTAWE

SWAGED AND ROUGH FORGED PARALLEL ROUND BARS AND ROUGH FORGED SQUARE BARS

ALGEMEEN / GENERAL

1. Bestellings word aangeneem in ooreenstemming met ons Algemne Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningesafslag van 2½%, mists betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

3. Alle pryse en ekstras hierin kwoteer is per metrieke ton (1 000 kilogram) gebaseer op die nominale massa. Verwys bladsye S2 en S3.

4. Normale inspeksie en toetsing word uitgevoer en is ingesluit in die spesifikasie ekstra. Wanneer inspeksie en/of bywoning van toetse deur die klant of sy verteenwoordiger verlang word, is die ekstras wat gevra word dié soos uiteengesit op bladsye P2.

5. Pryse en ekstras is die wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. All prices and extras quoted are per metric ton (1 000 kilograms) based on the nominal mass. Refer pages S2 and S3.

4. Normal inspection and testing is carried out and is included in the specification extra. When inspection and/or witnessing of tests is reqwuired by the customer or his representative the extras charged are as outlined on page P2.

5. Prices and extras are those ruling on date of dispatch, and are subject to change without notice.

PWV-GEBIED

Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

PWV-AREA

Consisting of the magisterial districts of Alberton, Alexandra Twonship, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

VORM- EN RUGGESMEDE PARALLELLE RONDSTAWE EN RUGGESMEDE VIERKANTSTAWE

SWAGED AND ROUGH FORGED PARALLEL ROUND BARS AND ROUGH FORGED SQUARE BARS

1.0 KOOLSTOFSTAAL

1. CARBON STEEL

A. PRYSE/PRICES

	mm
Ru-smee vierkantstawe	185 - 600
Ru-smee rondstawe	165 - 600
Vormsmeestawe	185 - 305

	mm
Rough-forged Square bars	185 - 600
Rough-forged Rounds	165 - 600
Swaged Bars	185 - 305

1.1 BASISPRYSE

(a) PWV[1])-gebied: Basispryse v.o.s. Yskorwerke, Pretoria, (Sylyn 1143, Cordelfos) plus vervoerkoste

(b) Buite PWV[1])-gebied: Basispryse per 1 000 kg v.o.s. Germiston plus vervoerkoste

1) Verwys bls. I1 par. C

1.1 BASIS PRICES

(a) PWV[1]) area: Basis prices f.o.r. Iscor Works, Pretoria, (Siding 1143, Cordelfos) plus transport costs.

(b) Outside PWV[1]) area: Basis prices per 1 000 kg f.o.r. Germiston plus transport costs

1) Refer page I1 par. C.

Spesifikasie/Specification	Leweringstoestand/ Supply Condition	Groottereeks/Size Range (mm)	(R.c.) *
SS 10/101 (432/510 MPa) BS 970: Part 1: 1972:- 070M20 **	Genormaliseerd/ Normalised	165 - 200	744-50
		205 - 600	780-00
SS 10/102 (541/695 MPa) SS 10/106 ** SS 10/106A **	Genormaliseerd/ Normalised	165 - 200	744-50
		205 - 355	780-00
BS 970: Part 1: 1972:- 080M40 **	Uitgegloei-en genormaliseerd/ Annealed and normalised	360 - 600	865-00
BS 970 : Part 1 : 1972: 070M55 **	Genormaliseerd/ Normalised	165 - 200	744-50
		205 - 305	780-00
	Uitgegloei en genormaliseerd/ Annealed and normalised	310 - 600	865-00

* Verwys par. 1.1 a) en b)

** Slegs teen gietpotanalise

1.2 HOEVEELHEIDEKSTRAS

Hoeveelheidsekstras is van toepassing op totale tonnemaat per item vir lewering by een bestemming op 'n keer gebaseer op die nominale massa van stawe en nie op werklike massa soos versend nie

* Refer par. 1.1 a) and b)

** To ladle analysis only

1.2 QUANTITY EXTRAS PER ITEM

Quantity extras are applicable to total tonnage per item for delivery to one destination at one time based on the nominal mass of bars and not on actual mass as dispatched.

Nominale Massa van Stawe (ton)/ Nominal Mass of Bars (tons)	Ekstras/ Extras (Rand)
1 - < 2	110-50
2 - < 3	74-25
3 - < 4	37-15
4 - < 5	18-20
≥ 5	0-00

1.3 GROOTTE-EKSTRAS

1.3 SIZE EXTRAS

Groottereeks/Size Range	Ekstras/ Extras (R.c.)
165 - 200	67-60
205 - 235	46-40
240 - 305	24-25
310 - 395	0-00
400 - 495	22-55
500 - 600	44-10
> 600 (Onderhewig aan beperkte lengtes/ subject to restricted lengths)	Op navraag/On enquiry

VORM- EN RUGESMEDE PARALELLE RONDSTAWE EN RUGESMEDE VIERKANTSTAWE

SWAGED AND ROUGH FORGED PARALLEL ROUND BARS AND ROUGH FORGED SQUARE BARS

2.0 ALLOOISTAAL

2.1 BASISPRYSE

(a) PWV[1])-gebied: Basispryse per 1 000 kg v.o.s. Yskorwerke, Pretoria, (Sylyn 1143, Cordelfos) plus vervoerkoste.

(b) Buite PWV[1])-gebied: Basispryse per 1 000 kg v.o.s. Germiston plus vervoerkoste

1) Verwys bls. Il par. C.

2.0 ALLOY STEEL

2.1 BASIS PRICES

(a) PWV[1]) area: Basis prices per 1 000 kg f.o.r. Iscor Works, Pretoria, (Siding 1143, Cordelfos) plus transport costs.

(b) Outside PWV[1]) area: Basis prices per 1 000 kg f.o.r. Germiston plus transport costs.

1) Refer page Il par.C.

Spesifikasie/Specification **	Leweringstoestand/Supply Condition	(Rand)*
BS 970: Part 2: 1970:-		
709M40	Uitgegloei/ Annealed	1 080-50
817M40		1 256-00
826M40		1 414-50
653M31		1 307-00
655A12		1 254-00

* Verwys par. 1 a) en b)
** Slegs teen gietpotanalise

* Refer par. 1 a) and b)
** To ladle analysis only

2.2 HOEVEELHEIDEKSTRAS PER ITEM

Hoeveelheidsekstras is van toepassing op totale tonnemaat per item vir lewering by een bestemming op 'n keer gebaseer op die nominale massa van stawe en nie op werklike massa soos versend nie.

2.2 QUANTITY EXTRAS PER ITEM

Quantity extras are applicable to total tonnage per item for delivery to one destination at one time based on the nominal mass of bars and not on actual mass as dispatched.

Nominale Massa van Stawe (ton)/ Nominal Mass of Bars (tons)	Ekstras/ Extras (Rand)
≤ 1	214-50
1 - ≤ 2	143-00
2 - ≤ 5	71-70
⩾ 5	0-00

2.3 GROOTE-EKSTRAS

2.3 SIZE EXTRAS

Groottereeks/Size Range (mm)	Ekstras/Extras (Rand)
165 - 195	41-30
200 - 245	20-55
250 - 395	0-00
400 - 495	21-50
500 - 600 (Onderhewig aan beperkte lengtes/ >600 Subject to restricted lengths)	42-35
	Op navraag/On enquiry

3.0 INSPEKSIE-EKSTRAS

3.1 Bywoning van megaies toetsing deur klant of sy verteen= ....woordiger..... R10-60

3.2 Inspeksie van produkte deur klant of sy verteenwoordiger..... R28-30

3.0 INSPECTION EXTRAS

3.1 Witnessing of mechanical testing by customer or his represen= ative R10-60

3.2 Inspection of products by customer or his representa= tive R28-30

4.0 LENGTE-EKSTRAS

Gespesifiseerde lengtes..... Op navraag.

4.0 LENGTH EXTRA

Specified lengths.....On enquiry.

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SMEESTUKKE / FORGINGS

VORM EN RUGESMEDE PARALLELLE RONDSTAWE EN RUGESMEDE VIERKANTSTAWE

SWAGED AND ROUGH-FORGED PARALLEL ROUND BARS AND ROUGH FORGED SQUARE BARS

SPESIFIKASIES / SPECIFICATIONS

1.0 ALGEMEEN

Spesifikasies waarvolgens smeestukke voorsien word, word op bladsye P1 en P2, aangetoon. Chemiese samestellings waarna verwys word is altyd gietpotanalise en produkanalise is onderhewig aan afwykings volgens aanvaarde internasionale standaarde.

1.0 GENERAL

Specifications to which forgings are supplied are listed in pages P1 and P2. Chemical compositions referred to are always ladle analyses and product analysis is subject to deviations in accordance with accepted international standards.

2.0 MASJINERINGTOELATING

Ten einde 'n bevredigende oppervlak by gemasjineerde stawe te verseker, moet 'n staaf met 'n groter afmeting bestel word en gemasjineer word tot die vereiste afmeting. Masjineringstoelatings soos aangetoon op bladsye S2 en S3 paragrawe 8.1 en 8.2 sal van toepassing wees.
(Vir vierkantstawe masjineringstoelating geld paragraaf 8.1)
In geval van hersmee sal slegs die masjineringstoelating soos aangetoon op bladsy S2 paragraaf 8.1 van toepassing wees op die hergesmede afmetings.

2.0 MACHINING ALLOWANCE

To ensure a satisfactory surface on machined-finished bars, a bar of a larger size should be ordered and machined down to the required dimension. Machining allowance as per pages S2 and S3 paragraphs 8.1 and 8.2 will apply.
(For rough forged squares a machining allowance as per paragraph 8.1 applies).
In the case of reforging the machining allowances as per page S2 paragraph 8.1 only apply on the dimensions of the reforged material

3.0 AFMETINGS

Die nominale afmetings waarin stawe normaalweg gelewer word, word in paragraaf 8.0 aangetoon. Stawe word in die Smeepers warmgesny in lengtes wat ongeveer 75 mm langer is as die gespesifiseerde gemasjineerde lengte.

3.0 DIMENSIONS

The nominal dimensions in which bars are regularly supplied, are shown in paragraph 8.0. Bars are cut hot in the Forge Press to a length approximately 75 mm over the specified machined-finished length.

4.0 PRYSBEPALING-/FAKTUURMASSA

Massa word bereken deur 75 mm snytoleransie te voeg by die bestelde lengte en te vermenigvuldig met die nominale massa/meter, soos aangetoon op bladsye S2 en S3 paragraaf 8.0.

4.0 PRICING/INVOICING MASS

Mass is calculated by adding 75 mm cutting tolerance to the ordered length and multiplied with the nominal mass/meter as shown on pages S2 and S3 paragraph 8.0.

5.0 MASSATOLERANS

Die werklike massa sal nie minder wees as die volgende persentasies van die faktuurmassa nie:

Vormgesmee - 97½%
Ru-gesmee - 96%

5.0 MASS TOLERANCE

The actual mass will not be less than the following percentages of the invoice mass:

Swaged - 97½%
Rough forged - 96%

6.0 MERKING

Stawe word gestempel met die kwaliteit, gietnommer, bestelnommer en grootte. Klante word versoek om, wanneer 'n staaf gemasjineer of hersmee word, die gietnommer na die voltooide staaf oor te plaas vir toekomstige identifikasie.

6.0 MARKING

Bars are stamped with the quality, cast number, order number and size. Customers are requested when machining or reforging bars, to transfer the cast number to the finished article for future identification.

7.0 SERTIFIKATE

Gietpotanalise- en *meganiese toetssertifikate word verskaf ten opsigte van elke smeestuk of stel smeestukke van een giet.

*Slegs waar van toepassing.

7.0 CERTIFICATES

Ladle analysis and *mechanical test certificates are supplied in respect of each forging or set of forgings from one cast.

*Where applicable

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SZ
S.P.E. 225
SMEESTUKKE
VORM EN RUGGESMEDE PARALLELLE RONDSTAWE
EN RUGSMEDE VIERKANTSTAWE
8.0 GROOTTES
8.1 Ru-gesmede Rondstawe

FORGINGS
SWAGED AND ROUGH-FORGED PARALLEL ROUND BARS
AND ROUGH FORGED SQUARE BARS
8.0 SIZES
8.1 Rough-forged Round Bars

NOMINALE DIAMETER/ NOMINAL DIAMETER (mm)	NOMINALE MASSA/ NOMINAL MASS kg/m	VIR AFDRAAI NA/ FOR TURNING TO (mm)	SMEELENGTE/ FORGED LENGTH (mm)	NOMINALE/ DIAMETER NOMINAL DIAMETER (mm)	NOMINALE MASSA NOMINAL MASS kg/m	VIR AFDRAAI NA/ FOR TURNING TO (mm)	SMEELENGTE/ FORGED LENGTH (mm)
165	168	140	2 000 - 4 800	385	914	345	2 000 - 7 500
170	178	145	2 000 - 4 800	390	938	350	2 000 - 7 500
175	189	150	2 000 - 4 800	395	962	355	2 000 - 7 500
180	200	155	2 000 - 4 800	400	986	360	2 000 - 7 500
185	211	160	*3 800 - 4 800	405	1 010	365	2 000 - 7 500
190	223	165	*3 800 - 4 800	410	1 040	370	2 000 - 7 500
195	234	170	*3 800 - 4 800	415	1 060	375	2 000 - 7 500
200	247	175	*3 800 - 4 800	420	1 090	380	2 000 - 7 500
205	259	180	*3 800 - 4 800	425	1 110	385	2 000 - 7 500
210	272	185	*3 800 - 4 800	430	1 140	390	2 000 - 7 500
215	285	190	*3 800 - 4 800	435	1 170	395	2 000 - 7 500
220	298	192,5	*3 800 - 5 500	440	1 190	400	2 000 - 7 500
225	312	195	*3 800 - 5 500	445	1 220	405	2 000 - 7 500
230	326	200	*4 800 - 5 500	450	1 250	410	2 000 - 7 500
235	340	205	*4 800 - 5 500	455	1 280	415	2 000 - 7 500
240	355	210	*4 800 - 5 500	460	1 300	420	2 000 - 7 500
245	370	215	*4 800 - 5 500	465	1 330	425	2 000 - 7 500
250	385	220	*4 800 - 5 500	470	1 360	430	2 000 - 7 500
255	401	225	*4 800 - 5 500	475	1 390	435	2 000 - 7 500
260	417	230	*4 800 - 5 500	480	1 420	440	2 000 - 7 500
265	433	235	*4 800 - 5 500	485	1 450	445	2 000 - 7 500
270	449	237,5	*4 800 - 7 500	490	1 480	450	2 000 - 7 500
275	466	240	*4 800 - 7 500	495	1 510	455	2 000 - 7 500
280	483	245	*4 800 - 7 500	500	1 540	460	2 000 - 7 500
285	501	250	*4 800 - 7 500	505	1 570	465	2 000 - 7 500
290	519	255	*4 800 - 7 500	510	1 600	470	2 000 - 7 500
295	537	260	*4 800 - 7 500	515	1 640	475	2 000 - 7 500
300	555	265	*4 800 - 7 500	520	1 670	480	2 000 - 7 500
305	574	267,5	*4 800 - 7 500	525	1 700	485	2 000 - 7 500
310	592	270	2 000 - 7 500	530	1 730	490	2 000 - 7 500
315	612	275	2 000 - 7 500	535	1 760	495	2 000 - 7 500
320	631	280	2 000 - 7 500	540	1 800	500	2 000 - 7 500
325	651	285	2 000 - 7 500	545	1 830	505	2 000 - 7 500
330	671	290	2 000 - 7 500	550	1 870	510	2 000 - 7 500
335	692	295	2 000 - 7 500	555	1 900	515	2 000 - 7 500
340	713	300	2 000 - 7 500	560	1 930	520	2 000 - 7 500
345	734	305	2 000 - 7 500	565	1 970	525	2 000 - 7 500
350	755	310	2 000 - 7 500	570	2 000	530	2 000 - 7 500
355	777	315	2 000 - 7 500	575	2 040	535	2 000 - 7 500
360	799	320	2 000 - 7 500	580	2 070	540	2 000 - 7 500
365	821	325	2 000 - 7 500	585	2 110	545	2 000 - 7 500
370	844	330	2 000 - 7 500	590	2 150	550	2 000 - 7 500
375	867	335	2 000 - 7 500	595	2 180	555	2 000 - 7 500
380	890	340	2 000 - 7 500	600	2 220	560	2 000 - 7 500

* Vir korter lengtes sien Vorm-gesmede stawe
* For shorter lengths see swage bars

1981-07-03

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1981-01-01

OBSOLETE

SMEEDSTUKKE

VORM EN RUGESMEDE PARALLELLE RONDSTAWE EN RUGESMEDE VIERKANTSTAWE

FORGINGS

SWAGED AND ROUGH-FORGED PARALLEL ROUND BARS AND ROUGH-FORGED SQUARE BARS

8.0 GROOTTES (Vervolg)

8.0 SIZES (Continued)

8.2 Vormgesmede Stawe

8.2 Swaged Bars

NOMINALE DIAMETER (mm) / NOMINAL DIAMETER (mm)	NOMINALE MASSA kg/m / NOMINAL MASS kg/m	VIR AFDRAAI NA/ FOR TURNING TO (mm)	SMEELENGTE/ FORGED LENGTH (mm)
185	211	165	2 000 - 3 800
190	223	170	2 000 - 3 800
195	234	175	2 000 - 3 800
200	247	180	2 000 - 3 800
205	259	185	2 000 - 3 800
210	272	190	2 000 - 3 800
215	285	195	2 000 - 3 800
220	298	200	2 000 - 3 800
225	312	205	2 000 - 3 800
230	326	205	2 000 - 4 800
235	340	210	2 000 - 4 800
240	355	215	2 000 - 4 800
245	370	220	2 000 - 4 800
250	385	225	2 000 - 4 800
255	401	230	2 000 - 4 800
260	417	235	2 000 - 4 800
265	433	240	2 000 - 4 800
270	449	245	2 000 - 4 800
275	466	250	2 000 - 4 800
280	483	255	2 000 - 4 800
285	501	260	2 000 - 4 800
290	519	265	2 000 - 4 800
295	537	270	2 000 - 4 800
300	555	275	2 000 - 4 800
305	574	280	2 000 - 4 800

8.3 Ru-gesmede Vierkantstawe

8.3 Rough-forged Square Bars

SY/ SIDE (mm)	NOMINALE MASSA/ NOMINAL MASS kg/m	SMEELENGTE/ FORGED LENGTH (mm)	SY/ SIDE (mm)	NOMINALE MASSA/ NOMINAL MASS kg/m	SMEELENGTE/ FORGED LENGTH (mm)	SY/ SIDE (mm)	NOMINALE MASSA/ NOMINAL MASS kg/m	SMEELENGTE/ FORGED LENGTH (mm)
185	269	)	325	829	)	465	1 697	)
190	283	)	330	855	)	470	1 734	)
195	298	)	335	881	)	475	1 771	)
200	314	)	340	907	)	480	1 809	)
205	330	)	345	934	)	485	1 847	)
210	346	)	350	962	)	490	1 885	)
215	363	)	355	989	)	495	1 923	)
220	380	)	360	1 017	)	500	1 963	)
225	397	)	365	1 046	)	505	2 002	)
230	415	)	370	1 075	)	510	2 042	)
235	434	)2 000-3 000	375	1 104	)	515	2 082	)
240	452	)	380	1 134	)2 000-3 500	520	2 123	)2000-3 500
245	471	)	385	1 164	)	525	2 164	)
250	491	)	390	1 194	)	530	2 205	)
255	510	)	395	1 225	)	535	2 247	)
260	531	)	400	1 256	)	540	2 289	)
265	551	)	405	1 288	)	545	2 332	)
270	572	)	410	1 320	)	550	2 375	)
275	594	)	415	1 352	)	555	2 418	)
280	615	)	420	1 385	)	560	2 462	)
285	638	)	425	1 418	)	565	2 506	)
290	660	)	430	1 451	)	570	2 550	)
295	683	)	435	1 485	)	575	2 595	)
300	707	)	440	1 520	)	580	2 641	)
305	730	)	445	1 554	)	585	2 686	)
310	754	)	450	1 590	)	590	2 733	)
315	779	)2 000-3 500	455	1 625	)	595	2 779	)
320	804	)	460	1 661	)	600	2 826	)

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STRUKTUURPROFIELE EN STAWE

STRUCTURAL PROFILES AND BARS

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STRUKTUURPROFIELE EN STAWE — STRUCTURAL PROFILES AND BARS

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Rondstawe	P7	Rounds	P7
Kwaliteitsekstras	P8	Quanlity Extras	P8
Verwerkingsekstras	P9	Processing Extras	P9
SPESIFIKASIES	S1-S4	SPECIFICATIONS	S1-S4

STRUKTUURPROFIELE EN STAWE

STRUCTURAL PROFILES AND BARS

ALGEMEEN

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½% mits betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

3. Alle items is onderworpe aan 'n versendingstolerans (Verwys bladsye P1 en S4.)

4. Alle pryse en ekstras hierin kwoteer is per metrieke ton (1000 kg)
Enige verwysing na die getal lengtes op die faktuur of vragbrief is slegs vir inligting.

5. Normale inspeksie en toetsing word uitgevoer is ingesluit by die spesifieke ekstra. Wanneer inspeksie en bywoning van toetse deur die klant of sy verteenwoordiger vereis word sal die ekstras soos uiteengesit op bladsy P9 gehef word.

6. Pryse en ekstras is die wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.

7. Yskor behou die reg voor om produkte te voorsien vanaf die Werke van sy keuse.

GENERAL

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. All items are subject to a dispatch tolerance (refer pages P1 and S4)

4. All prices and extras quoted are per metric ton (1000 kg)
Any reference to the number of lengths on the invoice or consignment note is for information only.

5. Normal inspection and testing is carried out and is included in the specification extra. When inspection and witnessing of tests is required by the customer or his representative the extras charged are as outlined on page P9

6. Prices and extras are those ruling on date of dispatch, and are subject to change.

7. Iscor reserves the right to supply material from the Works of its choice.

A. KONTROLELYS VIR PLASERING VAN BESTELLINGS EN NAVRAE

1. ALGEMEEN

(a) Bestemming
  (i) Posadres
    LET WEL: Toets- en analisesertifikate word na hierdie adres gestuur tensy uitdruklik anders versoek.
  (ii) Afleweringsadres

(b) Aflewering verlang
  (i) Datum
  (ii) Spoorvervoer
  (iii) Padvervoer

2. PRODUK

(a) Beskrywing

(b) Nominale afmetings
  (i) Dikte
  (ii) Wydte
  (iii) Lengte

(c) Hoeveelheid (Ton)
  - Totale massa van elke item

(d) Kwaliteit

(e) s Inspeksie verlang - spesifiseer

(f) Sertifisering - tipe sertifikate

(g) Eindgebruike - spesifiseer

(h) Verpakking verlang
  s Kontraknommer moet gespesifiseer word ingeval van SAS-inspeksie

B. KONTROLELYS VIR PRYSBEPALING

1. BASISPRYS

2. HOEVEELHEIDSEKSTRAS

3. BEPERKING OP VERSENDINGSTOLERANS

4. LENGTE-EKSTRAS

5. PROFIELEKSTRAS

6. KWALITEITEKSTRAS

7. VERWERKINGSEKSTRAS

8. INSPEKSIE-EKSTRAS

9. INVOERHEFFING (10,25/TON)

C. PWV-GEBIED
Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING AND ENQUIRIES

1. GENERAL

(a) Destination
  (i) Potal Address
    NOTE: Test and analysis certificates will be forwarded to this address unless specifically stated otherwise.
  (ii) Consigning Adress

(b) Delivery required
  (i) Date
  (ii) Rail Transport
  (iii) Road Transport

2. PRODUCT

(a) Description

(b) Nominal dimensions
  (i) Thickness
  (ii) Width
  (iii) Length

(c) Quantity (Tons)
  - Total mass of each item

(d) Quality

(e) s Inspection required - specify

(f) Certification - type of certificates

(g) End Uses - specify

(h) Packing required
  s Contract number to be specified in case of SAR-inspection

B. CHECK LIST FOR PRICING

1. BASIS PRICE

2. QUANTITY EXTRAS

3. LIMITATION ON DISPATCH TOLERANCE

4. LENGTH EXTRAS

5. SECTION EXTRAS

6. QUALITY EXTRAS

7. PROCESSING EXTRAS

8. INSPECTION EXTRAS

9. IMPORT LEVY (R10,25/TON)

C. PWV-AREA
Consisting of the magisterial districts of Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

DECLASSIFIED

1. **BASISPRYSE***

1.1 PWV*)-gebied: v.o.s. Yskorwerke, Pretoria (Sylyn 1143, Cordelfos plus Vervoerkoste.)

1.2 Buite PWV[1])-gebied: v.o.s. Germiston plus vervoerkoste.

*) Verwys Kontrolelys bladsy I2 paragraaf C

1. **BASIS PRICES***

(a) PWV[1]) area: f.o.r. Iscor Works, Pretoria/ (siding 1143 Cordelfos plus transport costs.)

(b) Outside PWV[1]) area: f.o.r. Germiston plus transport costs.

1) Refer Check List page I2 paragraph C

PRODUK/PRODUCT		BASISPRYS/BASIS PRICE (R.c.)		
		KATEGORIE/ CATEGORY L	KATEGORIE/ CATEGORY M	KATEGORIE/ CATEGORY S
I-Profiele (Tapsflens)	I-Section (Taper flange)		381-50	381-50
I-Profiele (Parallelflens)	I-Section (Parallel flange)			378-00
H-Profiele (Parallelflens)	H-Section (Parallel flange)			378-00
H-Profiele (Heipale)	H-Section (Piles)			378-00
I.P.E.-Profiele (Parallelflens)	I.P.E.-Section (Parallel flange		345-50	345-50
Kanaalprofiele	Channels		358-00	358-00
Hoekprofiele (Gelykbenig)	Angles (Equal leg)	355-00	355-00	355-00
Hoekprofiele (Ongelykbenig)	Angles (Unequal leg)	-	355-00	355-00
Platprofiele	Flats	380-00	380-00	380-00
Rondstawe	Rounds	350-00	387-50	387-50

2. **HOEVEELHEIDEKSTRAS EN AFTREKKINGS PER ITEM** [1])

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigings-bestelling deur die Korporasie uitgereik t.o.v. tonnemaat toegewys vir versending, na een bestemming soos dit die Werke pas.

2. **QUANTITY EXTRAS AND DEDUCTIONS PER ITEM** [1])

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works' convenience.

ITEM MASSA/ITEM MASS (TON)	L		M		S	
	EKSTRA EXTRA (R.c.)	AFTREKKING DEDUCTION (R.c.)	EKSTRA EXTRA (R.c.)	AFTREKKING DEDUCTION (R.c.)	EKSTRA/ EXTRA (R.c.)	AFTREKKING DEDUCTION (R.c.)
3 - < 5	44-95	-	67-30	-	*	-
5 - < 10	12-00	-	44-95	-	67-30	-
10 - < 20	0-00	0-00	12-00	-	44-95	-
20 - < 40		10-00	0-00	0-00	12-00	-
40 - < 80		10-00		10-00	0-00	0-00
80 - < 120		10-00		10-00		3-60
- ≥ 120		10-00		10-00		10-00

* Op navraag

NOTA:

'n Item word gedefineer as :

Dieselfde profiel, dieselfde lengte van dieselfde kwaliteit na een bestemming.

1) Van toepassing op bestellings aanvaar en bevestig vanaf 1981-07-03

* On enquiry

NOTE:

An item is defined as:

The same profile in the same length and and quality to one destination.

1) Applicable to orders accepted and confirmed as from 1981-07-03

3. **Beperkingekstra op standaerd versendingtolerans**

(Verwys bladsy S4 par. 7.4)

(i) 50% beperking van standaard R6-70

(ii) Wanneer 2½% versendingtolerans gespesifiseer word R13-40

(Slegs van toepassing op items onder 100 ton)

3. **Restriction ekstra on standard dispatch**

(Refer page S4 par. 7.4)

(i) 50% limitation of standard R6-70

(ii) When a 2½% dispatch tolerance is specified R13-40

(Applicable only to items under 100 tons)

YSKOR-BEPERK ISCOR LIMITED

S.P.E. 230

STRUKTUURPROFIELE EN STAWE STRUCTURAL PROFILES AND BARS

4. LENGTE-EKSTRAS

4. LENGTH EXTRAS

LENGTES/LENGTHS (m)	STANDAARD LENGTE IN TRAPPE VAN 1 m / STANDARD LENGTH IN INCREMENTS OF 1 m		NIE-STANDAARDLENGTE IN TRAPPE VAN MINIMUM 10 mm / NON-STANDARD LENGTH IN INCREMENTS OF 10 mm	
	INSLUITEND KORTLENGTES 4) / INCLUDING SHORT LENGTHS 4) (R.c.)	UITSLUITEND KORTLENGTES / EXCLUDING SHORT LENGTHS (R.c.)	INSLUITEND KORTLENGTES 4) / INCLUDING SHORT LENGTHS 4) (R.c.)	UITSLUITEND KORTLENGTES / EXCLUDING SHORT LENGTHS (R.c.)
< 6	Op navraag/On enquiry		Op navraag/On enquiry	
6 - 13	0-00[1]	13-80	13-80[1]	27-60
>13 - 18([3])	Nie beskikbaar/Not available		27-60[2]	41-40
>18 - 24([3])	Nie beskikbaar/Not available		41-40	55-20

1) 5% Kortlengtes moet aanvaar word
2) 10% Kortlengtes moet aanvaar word
3) Nie beskikbaar in rondstaal < 16 mm diameter nie.
4) Met dien verstande dat:-
   a) Toevallige kortlengtes vanaf 3 mm tot lengte bestel ingesluit word. (Bestellings moet gemerk word: TOEVALLIGE KORTLENGTES INGESLUIT)
      OF
   b) Nie 'n gespesifiseerde snylengte nie waar 'n snyreeks van minstens 3 m (bv. 9-12 m) bestel word.

1) 5% Short lengts to be accepted
2) 10% Short lengths to be accepted
3) Not available in rounds <16 mm diameter
4) With the understanding that:-
   a) Random short lengths from 3 m to length ordered are included (Orders must be endorsed: RANDOM SHORTS INCLUDED)
      OR
   b) Orders are placed to a cutting range of at least 3 m (e.g. 9-12 m) and not to a specified length.

1982-01-01 — Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated — 1981-07-03A

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STRUKTUURPROFIELE EN STAWE
5. PROFIELEKSTRAS

*STRUCTURAL PROFILES AND BARS
5. SECTION EXTRAS

5.1 I- EN H PROFIELE
(Nie beskikbaar in Sagte Staal)

5.1 I-AND H SECTIONS
(Not available in Mild Steel)

BESKRYWING/DESCRIPTION	PROFIELSPESIFIKASIE PROFILE SPECIFICATION	NOMINALEGROOTTE/ NOMINAL SIZE (mm)	MASSA/ MASS Kg/m	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S
A) I-Profiele (Tapsflens)/ I-Section (Taperflange)	BS4:Part :1972	127 x 76	13.4	-	47-00	-
	"	152 x 89	17.1	-	-	42-35
	"	178 x 102	21.5	-	-	28-35
	"	203 x 102	25.3	-	-	24-25
	Yskor/Iscor	203 x 152	52.1	-	-	21-85
	"	254 x 152	59.5	-	-	2-85
	"	305 x 152	65.5	-	-	1-65
B) I-Profiele (Parallelflens)/ I-Sections (Parallel flange)	BS4:Part 1:1972	203 x 133	25,3	-	-	75-20
			29.8	-	-	75-20
	"	254 x 146	31.3	-	-	50-75
			37.2	-	-	50-75
			43.2	-	-	50-75
	"	305 x 165	40.5	-	-	42-55
			46.1	-	-	42-55
			53.6	-	-	42-55
	"	356 x 171	44.8	-	-	42-55
			50.7	-	-	42-55
			56.7	-	-	42-55
			67.2	-	-	42-55
	"	406 x 178	53.8	-	-	34-20
			59.8	-	-	34-20
			67.2	-	-	34-20
			74.8	-	-	34-20
	"	457 x 191	67.1	-	-	42-55
			74.7	-	-	42-55
			82.0	-	-	42-55
			89.7	-	-	42-55
			98.3	-	-	42-55
	"	533 x 210*	82.2	-	-	59-05
			92.5	-	-	59-05
			101.0	-	-	59-05
			109.0	-	-	59-05
			122.0	-	-	59-05
C) H-Profiele (Parallelflens)/ H-Sections (Parallel flange)	BS4:Part : 1972	152 x 152	23.4	-	-	72-20
			29.8	-	-	72-20
			37.2	-	-	72-20
	"	203 x 203	46.2	-	-	59-05
			52.1	-	-	59-05
			59.6	-	-	59-05
			71.5	-	-	59-05
			86.4	-	-	59-05
	"	254 x 254*	72.9	-	-	51-00
			89.2	-	-	51-00
			107	-	-	51-00
			132	-	-	51-00
			167	-	-	51-00
	"	305 x 305*	96,8	-	-	54-65
			118	-	-	54-65
			137	-	-	54-65
			158	-	-	54-65
			198	-	-	Op na=
			240	-	-	vraag/
			283	-	-	On Enquiry
D) H-Profiele (Heipale)/ H-Sections (Piles)	BS4:Part 1:1972	203 x 203	53,5	-	-	59-05
	"	254 x 254 *	62,5	-	-	51-00
			84,7	-	-	51-00
	"	305 x 305*	79,0	-	-	54-65
			110,0	-	-	54-65
E) I-P-E Profiele (parallelflens) I-P-E Sections (parallel flange)	**	100 x 55	8,1	-	70-15	-
	**	120 x 64	10,4	-	52-95	-
	**	140 x 73	12,9	-	44-75	-
	**	160 x 82	15,8	-	-	54-15
	**	180 x 91	18,8	-	-	58-40
	**	200 x 100	22,4	-	-	65-15

*Slegs beskikbaar in BS 4360/1972 Gr 43A & 50B
**D.I.N. 1025 (Sheet 5): 1983

*Available only in RS4360/1972 Gr 43A & 50B

YSKOR BEPERK: ISCOR LIMITED

STRUKTUURPROFIELE EN STAWE — STRUCTURAL PROFILES AND BARS

5.2 Kanaalprofiele (Nie beskikbaar in sagte staal)

5.2 Channels (Not available in mild steel)

BESKRYWING/DESCRIPTION	PROFIELSPESIFIKASIE PROFILE SPECIFICATION	NOMINALEGROOTTE/ NOMINAL SIZE (mm)	MASSA/ MASS (Kg/m	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S
Kanaalprofiele/ Channels	Din 1026: 1963	100 x 50	10,6	-	49-30	-
	"	120 x 55	13,4	-	43-10	-
	BS4: Part 1:1972	127 x 64	14,9	-	33-30	-
	Din 1026: 1963	140 x 60	16,0	-	24-80	-
	BS4: Part 1:1972	152 x 76	17,9	-	22-15	-
	Din 1026: 1963	160 x 65	18,8	-	19-90	-
	Yskor/Iscor	178 x 54	14,5	-	-	36-40
	Din 1026: 1963	180 x 70	22,0	-	-	16-45
	"	200 x 75	25,3	-	-	15-35
	"	220 x 80	29,4	-	-	9-05
	"	240 x 85	33,2	-	-	6-05
	"	260 x 90	37,9	-	-	4-60
	"	280 x 95	41,8	-	-	3-05
	"	300 x 100	46,2	-	-	1-55

5.3 Hoekprofiele (Gelykbenig) (90 x 90 mm en groter nie beskikbaar in sagte staal)

5.3 Angles (Equal leg) (90 x 90 mm and larger not available in mild steel)

BESKRYWING/DESCRIPTION		NOMINALEGROOTTE/ NOMINAL SIZE (mm)	MASSA/ MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S
Hoekprofiele (Gelykbenig)/ Angles (Equal leg)	ISO/R657/1/1968	25 x 25 x 3	1,11	86-90	-	-
		x 5	1,77	83-00	-	-
	"	30 x 30 x 3	1,36	76-75	-	-
		x 5	2,18	75-10	-	-
	"	35 x 35 x 3	1,60	74-65	-	-
		x 5	2,57	70-05	-	-
	"	40 x 40 x 3	1,84	72-50	-	-
		x 5	2,97	65-30	-	-
		x 6	3,52	55-35	-	-
	"	45 x 45 x 3	2,09	62-15	-	-
		x 5	3,38	58-30	-	-
		x 6	4,00	53-85	-	-
	"	50 x 50 x 5	3,77	58-30	-	-
		x 6	4,47	52-45	-	-
		x 8	5,82	45-70	-	-
	"	60 x 60 x 5	4,57	-	58-30	-
		x 6	5,42	-	52-45	-
		x 8	7,09	-	47-00	-
		x 10	8,69	-	39-65	-
	"	70 x 70 x 6	6,38	-	43-65	-
		x 8	8,36	-	37-85	-
		x10	10,3	-	32-05	-
	"	80 x 80 x 6	7,34	-	37-85	-
		x 8	9,63	-	33-50	-
		x10	11,9	-	30-55	-
		x12	14,0	-	24-80	-
	"	90 x 90 x 8	10,9	-	30-55	-
		x10	13,4	-	23-35	-
		x12	15,9	-	17-50	-
	"	100 x 100 x 8	12,2	-	27-70	-
		x10	15,0	-	21-85	-
		x12	17,8	-	17-50	-
		x15	21,9	-	11-65	-
	"	120 x 120 x10	18,2	-	-	29-10
		x12	21,6	-	-	14-55
		x15	26,6	-	-	11-65
	"	150 x 150 x 1	27,3	-	-	14-55
		x15	33,8	-	-	10-20
		x18	40,1	-	-	7-30
				-	-	-

DECOMMISSIONED

STRUKTUURPROFIELE EN STAWE

5.4 Hoekprofiele (Ongelykbenig)
(Nie beskikbaar in sagte staal)

STRUCTURAL PROFILES AND BARS

5.4 Angles (Unequal leg)
(Not available in mild steel)

BESKRYWING/DESCRIPTION	PROFIELSPESIFIKASIE PROFILE SPECIFICATION	NOMINALEGROOTTE NOMINAL SIZE (mm)	MASSA/MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S
Hoekprofiele (Ongelykbenig)/ Angles (Unequal Leg)	ISO/R657/II/1968	100 x 75 x 8	10,6	-	42-30	-
		x10	13,0	-	40-85	-
		x12	15,4	-	38-70	-
	"	125 x 75 x 8	12,2	-	40-15	-
		x10	15,0	-	37-20	-
		x12	17,8	-	34-30	-
	"	130 x 75 x10	17,0	-	-	32-80
		x12	20,2	-	-	29-85
		x15	24,8	-	-	26-95
				-	-	-
	"	150 x 90 x10	18,2	-	-	34-30
		x12	21,6	-	-	32-80
		x15	26,6	-	-	37-20

5.5 Platstawe

5.5 Flats

NOMINALEGROOTTE NOMINAL SIZE (mm)	MASSA/MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S	NOMINALEGROOTTE NOMINAL SIZE (mm)	MASSA/MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S
20 x 5	0,785	91-20	-	-	45 x 5	1,77	60-15	-	-
x 6	0,942	91-20	-	-	6	2,12	60-15	-	-
x 8	1,26	71-30	-	-	8	2,83	39-20	-	-
x10	1,57	46-15	-	-	10	3,53	33-60	-	-
25 x 5	0,981	71-30	-	-	12	4,24	33-60	-	-
x 6	1,18	71-30	-	-	14	4,95	29-35	-	-
x 8	1,57	46-15	-	-	16	5,65	29-35	-	-
x10	1,96	39-20	-	-	18	6,36	29-35	-	-
x12	2,36	39-20	-	-	20	7,07	29-35	-	-
30 x 5	1,18	71-30	-	-	50 x 5	1,96	60-15	-	-
x 6	1,41	71-30	-	-	6	2,36	60-15	-	-
x 8	1,88	46-15	-	-	8	3,14	39-20	-	-
x10	2,36	39-20	-	-	10	3,93	33-60	-	-
x12	2,83	39-20	-	-	12	4,71	33-60	-	-
x14	3,30	36-35	-	-	14	5,50	29-35	-	-
35 x 5	1,37	60-15	-	-	16	6,28	29-35	-	-
x 6	1,65	60-15	-	-	18	7,06	29-35	-	-
x 8	2,20	39-20	-	-	20	7,85	29-35	-	-
x10	2,75	33-60	-	-	25	9,81	29-35	-	-
x12	3,30	33-60	-	-	55 x 6	2.59	60-15	-	-
x14	3,85	29-35	-	-	8	3,45	39-20	-	-
x16	4,40	29-35	-	-	10	4,32	33-60	-	-
40 x 5	1,57	60-15	-	-	12	5,18	33-60	-	-
6	1,88	60-15	-	-	14	6,04	33-60	-	-
8	2,51	39-20	-	-	16	6,91	33-60	-	-
10	3,14	33-60	-	-	18	7,77	33-60	-	-
12	3,77	33-60	-	-	20	8,64	33-60	-	-
14	4,40	29-35	-	-	25	10,8	33-60	-	-
16	5,02	29-35	-	-			-	-	-
18	5,65	29-35	-	-			-	-	-
20	6,28	29-35	-	-			-	-	-
							-	-	-

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STRUKTUURPROFIELE EN STANGE — STRUCTURAL PROFILES AND BARS

5.5 Platstawe (Vervolg) — 5.5 Flats (Continued)

NOMINALEGROOTTE NOMINAL SIZE mm x mm	MASSA/ MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S	NOMINALEGROOTTE NOMINAL SIZE (mm)	MASSA/ MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S
60 x 6	2,83	60-15	-	-	130 x 8	8,16	-	60-15	-
8	3,77	39-20	-	-	10	10,2	-	39-20	-
10	4,71	33-60	-	-	12	12,2	-	33-60	-
12	5,65	33-60	-	-	14	14,3	-	29-35	-
14	6,59	33-60	-	-	16	16,3	-	29-35	-
16	7,54	33-60	-	-	18	18,4	-	29-35	-
18	8,48	33-60	-	-	20	20,4	-	29-35	-
20	9,42	33-60	-	-	25	25,5	-	29-35	-
25	11,8	33-60	-	-	30	30,6	-	23-75	-
30	14,1	33-60	-	-	35	35,7	-	23-75	-
65 x 6	3,06	60-15	-	-	40	40,8	-	23-75	-
8	4,08	39-20	-	-	45	45,9	-	23-75	-
10	5,10	33-60	-	-	50	51,0	-	23-75	-
12	6,12	33-60	-	-	150 x 8	9,42	-	60-15	-
14	7,14	33-60	-	-	10	11,8	-	39-20	-
16	8,16	33-60	-	-	12	14,1	-	33-60	-
18	9,18	33-60	-	-	14	16,6	-	29-35	-
20	10,2	33-60	-	-	16	18,8	-	29-35	-
25	12,8	33-60	-	-	18	21,2	-	29-35	-
30	15,3	33-60	-	-	20	23,6	-	29-35	-
70 x 6	3,30	60-15	-	-	25	29,4	-	29-35	-
8	4,40	39-20	-	-	30	35,3	-	23-75	-
10	5,50	33-60	-	-	35	41,2	-	23-75	-
12	6,59	33-60	-	-	40	47,1	-	23-75	-
14	7,69	33-60	-	-	45	53,0	-	23-75	-
16	8,79	33-60	-	-	50	58,9	-	23-75	-
18	9,89	33-60	-	-	*180 x10	14,1	-	-	32-20
20	11,0	33-60	-	-	12	17,0	-	-	32-20
25	13,7	33-60	-	-	14	19,8	-	-	26-55
30	16,5	33-60	-	-	16	22,6	-	-	26-55
80 x 6	3,77	-	60-15	-	18	25,4	-	-	26-55
8	5,02	-	39-20	-	20	28,3	-	-	26-55
10	6,28	-	33-60	-	25	35,3	-	-	26-55
12	7,54	-	33-60	-	30	42,4	-	-	26-55
14	8,79	-	33-60	-	35	49,5	-	-	26-55
16	10,0	-	33-60	-	40	56,5	-	-	26-55
18	11,30	-	33-60	-	45	63,6	-	-	26-55
20	12,6	-	33-60	-	50	70,7	-	-	26-55
25	15,7	-	33-60	-	*200 x10	15,7	-	-	32-20
90 x 6	4,24	-	60-15	-	12	18,8	-	-	32-20
8	5,65	-	39-20	-	14	22,0	-	-	26-55
10	7,07	-	33-60	-	16	25,1	-	-	22-35
12	8,48	-	33-60	-	18	28,3	-	-	22-35
14	9,89	-	33-60	-	20	31,4	-	-	22-35
16	11,3	-	33-60	-	25	39,2	-	-	22-35
18	12,7	-	33-60	-	30	47,1	-	-	22-35
20	14,1	-	33-60	-	35	55,0	-	-	22-35
100 x 6	4,71	-	60-15	-	40	62,8	-	-	22-35
8	6,28	-	39-20	-	45	70,6	-	-	22-35
10	7,85	-	33-60	-	50	78,5	-	-	22-35
12	9,42	-	33-60	-	*250 x16	31,4	-	-	15-35
14	11,10	-	29-35	-	18	35,3	-	-	15-35
16	12,6	-	29-35	-	20	39,2	-	-	13-95
18	14,1	-	29-35	-	25	49,1	-	-	11-25
20	15,7	-	29-35	-	30	58,9	-	-	9-80
25	19,6	-	29-35	-	35	68,7	-	-	9-80
30	23,6	-	29-35	-	40	78,5	-	-	9-80
35	27,5	-	29-35	-	45	88,3	-	-	9-80
40	31,4	-	29-35	-	50	98,1	-	-	9-80
45	35,3	-	29-35	-	55	108,0	-	-	13-95
50	39,2	-	29-35	-	*300x 16	37,7	-	-	8-40
110 x 6	5,18	-	60-15	-	18	42,4	-	-	8-40
8	6,91	-	39-20	-	20	47,1	-	-	8-40
10	8,64	-	33-60	-	25	58,9	-	-	7-00
12	10,4	-	33-60	-	30	70,6	-	-	5-60
14	12,1	-	29-35	-	35	82,4	-	-	5-60
16	13,8	-	29-35	-	40	94,2	-	-	5-60
18	15,5	-	29-35	-	45	106,0	-	-	5-50
20	17,3	-	29-35	-	50	118,0	-	-	5-60
25	21,6	-	29-35	-	55	130,0	-	-	8-40
30	25,9	-	29-35	-			-	-	-
35	30,2	-	29-35	-			-	-	-
40	34,5	-	29-35	-			-	-	-
45	38,9	-	29-35	-			-	-	-
50	43,2	-	29-35	-			-	-	-

* Nie beskikbaar in sagte staal — * Not available in mild steel

STRUKTUURPROFIELE EN STAWE

5.6 Rondstawe (Lengtes en haspels)
(⩾ 45 mm - Nie beskikbaar in Sagte Staal)

STRUCTURAL PROFILES AND BARS

5.6 Rounds (Lengths and coils)
(⩾ 45 mm - Not available in Mild Steel)

NOMINALE GROOTTE NOMINAL SIZE (mm)	MASSA/ MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S	NOMINALE GROOTTE NOMINAL SIZE (mm)	MASSA/ MASS (Kg/m)	EKSTRA/EXTRA (R.c.) KATEGORIE/CATEGORY L	M	S
5,5	0,187	72-05	-	-	32,0	6,31	10-40	-	-
6,0	0,222	68-55	-	-	33,5	6,92	10-40	-	-
6,5	0,261	72-05	-	-	35,0	7,55	10-40	-	-
7,0	0,302	70-30	-	-	37,0	8,44	19-35	-	-
7,5	0,347	72-05	-	-	38,0	8,90	19-35	-	-
8,0	0,395	52-45	-	-	40,0	9,86	19-35	-	-
8,5	0,445	55-95	-	-	42,0	10,9	33-00	-	-
9,0	0,499	52-45	-	-	45,0	12,5	-	33-00	-
9,5	0,556	55-95	-	-	48,0	14,2	-	34-65	-
10,0	0,617	45-75	-	-	50,0	15,4	-	34-65	-
10,5	0,680	45-75	-	-	53,0	17,3	-	36-30	-
11,0	0,746	45-75	-	-	55,0	18,7	-	36-30	-
11,5	0,815	45-75	-	-	58,0	20,7	-	38-00	-
12,0	0,888	40-30	-	-	60,0	22,2	-	38-00	-
12,5	0,963	40-30	-	-	63,0	24,5	-	39-70	-
13,0	1,04	40-30	-	-	65,0	26,0	-	39-70	-
13,5	1,12	40-30	-	-	68,0	28,5	-	41-25	-
14,0	1,21	32-80	-	-	70,0	30,2	-	41-25	-
14,5	1,30	32-80	-	-	73,0	32,9	-	44-55	-
15,0	1,39	32-80	-	-	75,0	34,7	-	44-55	-
16,0	1,58	28-35	-	-	78,0	37,5	-	44-55	-
16,5	1,68	28-35	-	-	80,0	39,5	-	44-55	-
17,0	1,78	28-35	-	-	83,0	42,5	-	47-90	-
18,0	2,00	23-85	-	-	88,0	47,7	-	47-90	-
18,5	2,11	23-85	-	-	90,0	49,9	-	47-90	-
			-	-	95,0	55,6	-	51-15	-
20,0	2,47	19-35	-	-	100,0	61,7	-	-	51-15
20,5	2,59	19-35	-	-	105,0	68,0	-	-	52-90
21,5	2,85	19-35	-	-	108,0	71,9	-	-	52-90
22,0	2,98	16-45	-	-	115,0	81,5	-	-	52-90
23,0	3,26	16-45	-	-	120,0	88,8	-	-	54-60
24,0	3,55	13-45	-	-	130,0	104,0	-	-	56-15
25,0	3,85	7-45	-	-	134,0	111	-	-	61-20
26,0	4,17	7-45	-	-	140,0	121	-	-	61-20
27,0	4,49	7-45	-	-	145,0	130	-	-	61-20
28,0	4,83	7-45	-	-	150,0	139,0	-	-	66-05
30,0	5,55	7-45	-	-	160,0	158	-	-	67-85
			-	-	165,0	168,0	-	-	67-85

NOTAS:

(a) Gewone Rond:
10,0 - 165 mm Lengtes (6,0 en 8,0 mm op navraag)
6,0 & 8,0 mm Haspels

(b) Swartstaaf vir Blinkstaal
5,5 - 9,5 mm - Haspels
10,0 - 32,0 mm - Haspels en Lengtes
32,0 - 165,0 mm - Lengtes

NOTES:

(a) Ordinary Rounds
10,0 - 165 mm - Lengths (6,0 en 8,0 mm on enquiry)
6,0 & 8,0 mm - Coils

(b) Black Bar for Bright Steel
5,5 - 9,5 mm - Coils
10,0 - 32,0 mm - Coils and Lengths
32,0 - 165,0 mm - Lengths

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S.P.E.230

STRUKTUURPROFIELE EN STAWE — STRUCTURAL PROFILES AND BARS

6. KWALITEITEKSTRAS — 6. QUALITY EXTRAS

KWALITEITE/QUALITIES		EKSTRA/EXTRA (R.c.)		
		PROFIELE/ SECTIONS	RONDSTAWE/ ROUNDS	PLATSTAWE FLATS
6.1 Sagte Staal	6.1 Mild Steel	0-00	0-00	0-00
6.2 B.S. Spesifikasies	6.2 B.S. Specifications			
B.S.4360/1972 Grade 43A*	B.S.4360/1972 Grade 43A*	10-00	10-00	10-00
B.S.4360/1972 Grade 50B*	B.S.4360/1972 Grade 50B*	58-25	58-25	58-25
B.S. 970/1972 Part 1	B.S. 970/1972 Part 1			
070M55	070M55	-	53-75	-
070M20	070M20	-	38-00	-
080M40	080M40	-	46-25	-
6.3 **SAS/CME 9/1979 (Nie Hittebehandeld)	6.3 **SAR/CME 9/1979 (Not Heat Treated)			
Simbool 8	Symbol 8	18-00	18-00(a)	18-00(a)
Simbool 7	Symbol 7	-	43-75(a)	43-75(a)
Simbool 6	Symbol 6	-	18-00(a)	-
Simbool 1	Symbol 1	-	62-00(a)	-
Simbool 2	Symbol 2	-	-	62-00(a)
Simbool 4	Symbol 4	-	62-00(a)	62-00(a)
6.4 S.S. Spesifikasies	6.4 S.S. Specifications			
S.S.10/25A (Rondstawe vir staafmeulens)	S.S.10/25A (Rod Mill Bars)	-	36-00	-
S.S.10/200 (Slytbestande Platstawe)	S.S.10/200 (Hardwearing (Flats)	-	-	37-25
6.5 Yskor-Treksterktereeks 540/695 MPa	6.5 Iscor Tensile Range 540/695 MPa	-	47-25	47-25
6.6 Koolstofstaal met 'n Maksimum Mangaangehalte van 0,90%	6.6 Carbon Steels with a Maximum Manganese Content of 0,90%			
0,35/0,45% C	0,35/0,45% C	-	47-25	-
0,40/0,50% C	0,40/0,50% C	-	52-00	-
0,55/0,70% C	0,55/0,70% C	-	56-50	-
6.7 Corten	6.7 Corten			
Corten A. ≤ 12,7mm	Corten A. ≤ 12,7mm	138-75	138-75(b)	138-75
Corten B. > 12,7mm	Corten B. > 12,7mm	138-75	138-75(b)	138-75
6.8 B.S. 4360/1972	6.8 B.S. 4360/1972			
Graad WR 50A.1 ≤ 12,7mm	Grade WR 50A.1 ≤ 12,7mm	138-75	138-75	138-75
Graad WR 50B.1 > 12,7mm	Grade WR 50B.1 > 12,7mm	138-75	138-75	138-75
6.9 ASTM A242-75	6.9 ASTM A242-75			
Tipe I ≤ 12,7mm	Type I ≤ 12,7mm	138-75	138-75	138-75
Tipe II > 12,7mm	Type II > 12,7mm	138-75	138-75	138-75
6.10 SAE/AISIC SPESIFIKASIES	6.10 SAE/AISIC SPECIFICATION			
C 1018/C1018	C 1018/C1018	-	38-00	-
C 1016/C1016	C 1016/C1016	-	54-25	-
C 1015/C1015	C 1015/C1015	-	54-25	-
C 1045/C1045	C 1045/C1045	-	69-75	-

* Indien enige materiaal versink gaan word, moet alle kontrakte en bestellings, benewens die basiese staalspesifikasie, ook duidelik aandui dat die staal geskik moet wees vir warmdompelversinking.

° 'n Gewysigde buigtoets met 'n profiel van 25 mm x 19 mm gebruik om 'n radius van 25 mm vir simbool 2 en gebuig om 'n radius van 16 mm vir simbool 1 word uitgevoer.

(a) Indien slegs chemiese en meganiese eienskappe gespesifiseer word, word ekstra met R8-00 per ton verminder.

(b) Slegs rondstawe <45 mm.

(c) Platstaal dunner as 10 mm slegs analise en buigtoets.

OPMERKING:

Die normale produksie van strukturele profiele is bestem vir algemene strukturele doeleindes. Enige proses vir beskermende dekking wat voorbereiding vereis, sal meebring dat 'n sekere mate van oppervlak-afwerking gedoen moet word. Sodanige afwerking word as die verantwoordelikheid van die koper beskou.

* If any material is to be galvanised all contracts and orders must, in addition to the basic steel specifications, also clearly indicate that the steel must be suitable for hot-dip galvanising.

° A modified bend test with a 25 mm x 19 mm section bent round a radius of 25 mm for symbol 2 and bent round a radius of 16 mm for symbol 1 is carried out.

(a) If chemical and mechanical properties only are specified the extra will be reduced by R8-00 per ton.

(b) Rounds <45 mm only.

(c) Flats less than 10 mm thick, to analysis and bend test only.

NOTE:

The normal production of structural sections is intended for general structural purposes. Any process for protective coatings which requires preparation would entail a certain amount of surface conditioning. Such conditioning is considered to be the purchaser's responsibility.

7. VERWERKINGEKSTRAS / PROCESSING EXTRAS

7.1 TOLERANSE
(a) Wals tot kleiner toleransies as standaard ..... Op navraag
(b) Sny tot kleiner toleransies as standaard ..... Op navraag

7.1 TOLERANCES
(a) Rolling to tolerances closer than standard .....On enquiry
(b) Cutting to tolerances closer than standard .....On enquiry

7.2 OPPERVLAKGEHALTE
(a) Materiaal vir masjinering
Materiaal word gewaarborg om vry te wees van oppervlakdefekte indien die nominale diameter van die swartstaaf met die volgende persentasies verminder word:
Oppervlakgraad: M3:8% ..... R 0-00
" M2:5% R28-90
" M1:3% .....Op navraag

(b) Materiaal vir blinktrekking
Materiaal word gewaarborg om nie die ondergenoemde maksimum persentasie defekdiepte op finale produkte te oorskry nie:
Oppervlakgraad: D3:4% ..... R 0-00
D2;2½%..... R28-90

7.2 SURFACE QUALITY
(a) Material for machining
Material will be guaranteed to be free from surface defects if the nominal diameter of the Black Bar is reduced by the the following percentages:
Surface Grade: M3:8% ... R 0-00
" M2:5% ... R28-90
" M1:3% ..on enquiry

(b) Material for bright drawing
Material will be guaranteed not to exceed the undermentioned maximum percentage defect depths on final products:
Surface grade: D3:4% ... R 0-00
D2:2½%... R28-90

7.3 PRESIESE HOEVEELHEID ..... Op navraag

7.3 EXACT COUNT.....On enquiry

8. INSPEKSIE-EKSTRAS / INSPECTION EXTRAS

8.1 Bywoning van meganiese toetsing deur klant of sy verteenwoordiger ..... R 5-00

8.1 Witnessing of mechanical testing by customer or his representative R 5-00

8.2 Vir elke bykomende instansie wat meganies toetsing bywoon ..... .R 9-00

8.2 For each additional authority witnessing mechanical testing . R 9-00

8.3 Inspeksie van produkte deur klant of sy verteenwoordiger ..... R 9-00

8.3 Inspection of products by customer or his representative ..... R 9-00

8.4 Vir elke bykomende instansie wat produkte inspekteer R18-00

8.4 For each additional inspecting authority R18-00

9. EKSTRA VIR TOETS- EN GIETPOTANALISE-SERTIFIKATE / EXTRA FOR TEST AND LADLE ANALYSIS CERTIFICATES

(Wanneer nie deur die staalspesifikasie vereis word nie)
(When not called for by the steel specification)

PER ITEM TON(S)	GIETANALISE-SERTIFIKATE CAST ANALYSIS CERTIFICATES (R.c.)	TOETS- EN GIETANALISE-SERTIFIKATE TEST AND CAST ANALYSIS CERTIFICATES (R.c.)
0 - 10	4-10	8-00
>10 - 20	3-50	7-20
>20 - 30	1-90	4-10
>30 - 40	1-50	2-85
> 40	0-95	1-80

STRUKTUURPROFIELE EN STAWE: SPESIFIKASIES

STRUCTURAL PROFILES AND BARS SPECIFICATION

1.0 ALGEMEEN

1.1 Spesifikasies waarvolgens produkte voorsien word, word op bladsy P8 aangetoon. Chemiese samestellings waarna verwys word is altyd gietpotanalises en produkanalise is onderhewig aan afwykings volgens aanvaarde internasionale standaarde.

1.2 Sagte staal het normaalweg 'n koolstof inhoud wat nie 0,30% oorskry nie en word nie voorsien volgens 'n spesifieke analise of meganiese eienskappe nie. Derhalwe word toets of gietanalisesertifikate nie voorsien nie.

2.0 OPPERVLAKGEHALTE

2.1 Profiele en Stawe

(a) Oppervlakgebreke tot 'n maksimum diepte van 4% van die nominale dikte/diameter sal nie beskou word as 'n rede vir afkeuring nie.

(b) Groter oppervlakgebreke kan verwyder word onder voorwaarde dat die nominale dikte/diameter nie met meer as 7% verminder word nie.

2.2 Swartstaaf vir Blinkstaal

Verwys na bladsy P9 paragraaf 7.2

3.0 PROFIELSPESIFIKASIES EN GROOTTES

Verwys na bladsye P3, P4, P5, P6 en P7

4.0 LENGTES

Verwys na bladsy P2.

5.0 MASSAS EN AFMETINGS VAN HASPELS

1.0 GENERAL

1.1 Specifications to which products are supplied are listed on page P8. Chemical compositions referred to are always ladle analyses and product analysis is subject to deviations in accordance with accepted international standards.

1.2 Mild steel normally has a carbon content not exceeding 0,30% and is not supplied to any specific analysis or mechanical properties. Analysis and test certificates are therefore not provided.

2.0 SURFACE QUALITY

2.1 Profiles and Bars

(a) Surface defects up to a maximum depth of 4% of the nominal thickness/diameter shall not be considered as a reason for rejection.

(b) Larger surface defects may be removed provided that the nominal thickness/diameter is not reduced by more than 7%.

2.2 Black Bar for Bright Steel

Refer to page P9 paragraph 7.2

3.0 PROFILE SPECIFICATION AND SIZES

Refer to pages P3, P4, P5, P6 and P7

4.0 LENGTHS

Refer to page P2.

5.0 MASS AND DIMENSIONS OF COILS

	NEWCASTLE			PRETORIA		
	5,5-13,0mm	>13-21 mm	> 21 mm	5,5-10,5 mm	>10,5-14,5 mm	>14,5-26 mm
Gemiddelde massa / Average Mass (kg)	1680	1 300	2 200	680	253	375
Maksimum binnediameter / Maximum inside diameter (mm)	800	1 100	1 100	800	790	790
Maksimum buitediameter / Maximum outside diameter (mm)	1250	1 400	1 400	1 150	1 100	1 100
Maksimum hoogte / Maximum height (mm)	1250	1 000	1 100	2 000[a])	-	-
Vir 95% van bestelde massa / For 95% of ordered mass	1250-1750 kg	900-1 300 kg	1 700-2 200 kg	580-700 kg	205-275 kg	329-395 kg
Vir 5% van bestelde massa / For 5% of ordered mass	300-1250 kg	300-900 kg	600-1 700 kg	300-580 kg	130-205 kg	190-320 kg

NOTA:

(a) 680 kg Haspels vanaf Pretoria word saam gebondel in pakka van 3.

(b) Alle ander haspels is normaalweg enkel.

(c) 5,5 - 13,0 mm (Newcastle) en 5,5 - 10,5 mm (Pretoria) word normaalweg Stelmor behandel afgekoel en meganiese ontskaling word nie aanbeveel nie.

NOTE:

(a) 680 kg Coils from Pretoria are bundled in stacks of 3.

(b) All other coils are normally single.

(c) 5,5 - 13 mm (Newcastle) and 5,5 - 10,5 mm (Pretoria) is normally Stelmor control coolled and is not recommended for mechanical descaling.

ALGEMEEN (Vervolg)

6.0 BEREKENING VAN NOMINALE MASSA
Die nominale massa per eenheidslengte word bereken op 'n digtheidsfaktor van 7,85 g/cm^3

7.0 **TOLERANSE**
7.1* Lot-toleranse
Hieronder word verstaan die afwyking tussen die werklike massa voorsien (per vragmotor/trokvrag) en die nominale massa soos bereken vanaf lengtes voorsien.

GENERAL (Continued)

6.0 CALCULATION OF NOMINAL MASS
The nominal mass per unit length is calculated from a density factor of 7,85 g/cm^3

7.0 **TOLERANCES**
7.1* Batch Tolerances
This is defined as the variance between the actual mass supplied (per truck/lorry load) and the mass as calculated from the nominal mass and length supplied.

PROFIEL SECTION	TOELAATBARE AFWYKING PERMISSIBLE VARIANCE
I-profiele, H-profiele, Kanaal-profiele, Hoekprofiele, Platstawe en Rondstawe I-Sections, H-Sections, Channels Angles, Flats, Rounds	± 4%
BEHALWE/EXCEPT	
178x54 mm x14,5 kg/m Kanaal/Channel	+ 5% - 3%
Hoekprofiele/Angles 5,0 mm Dikte/Thickness	± 8%

* Haspels uitgesluit

* Excluding coils

7.2 Dimensionele toleranse
(i) I- en H-profiele, Kanale en Hoeke
Soos per profielspesifikasie (sien bladsye P3 tot P5). Indien nie gespesifiseer nie, dan volgens SAISC-spesifikasies.
(ii) Platstawe (Haakse rand)

7.2 Dimensional tolerances
(i) I- and H-sections, Channels and Angles
As per profile specification (see pages P3 to P5). If not specified then according to SAISC-spesifications.
(ii) Flats (Square edge)

NOMINALE WYDTE NOMINAL WIDTH (mm)	TOELAATBARE AFWYKING IN WYDTE PERMISSIBLE VARIANCE IN WIDTH (mm)
≤ 25	+0,8 - 0,4
> 25 - 50	+1,2 - 0,8
> 50 - 100	+1,6 - 1,2
> 100 - 150	+2,4 - 1,6
> 150 - 200	+4,8 - 2,0

NOMINALE DIKTE NOMINAL THICKNESS (mm)	TOELAATBARE AFWYKING IN DIKTE PERMISSIBLE VARIANCE IN THICKNESS (mm)
6, 8, 10	± 0,4
12, 14, 16, 18 & 20	+0,8 - 0,4
22, 25, 30	± 0,8
35, 40	+1,6 - 0,8
45, 50	± 1,6

UNCONTROLLED

STRUKTUURPROFIELE EN STAWE; ALGEMEEN (Vervolg)

7.2 DIMENSIONELE TOLERANSIE (Vervolg)

(iii) Platstawe (Geronde rand)

STRUCTURAL PROFILES AND BARS GENERAL (Continued)

7.2 DIMENSIONAL TOLERANCES

(iii) Flats (Rounded edge)

NOMINALE WYDTE NOMINAL WIDTH (mm)	TOELAATBARE AFWYKING IN WYDTE PERMISSIBLE VARIANCE IN WIDTH (mm)
>200	± 6,4

NOMINALE DIKTE NOMINAL THICKNESS (mm)	TOELAATBARE AFWYKING IN DIKTE PERMISSIBLE VARIANCE IN THICKNESS (mm)
10 - 25	± 0,8
>25	+ 1,6 - 0,8

(iv) Rondstaal

(iv) Rounds

NOMINALE DIAMETER/ NOMINAL DIAMETER (mm)	TOELAATBARE AFWYKING IN / PERMISSIBLE VARIATION IN:	
	DIAMETER (mm)	* MAKSIMUM OVALITEIT/MAXIMUM OVALITY (mm)
(a) Gewone Rond/ Ordinary Rounds		
6; 8; 10	± 0,40	0,80
>10 - 50	± 0,80	1,60
>50 - 100	± 1,60	2,40
>100 - 165	± 3,20	4,20
(b) Swartstaaf vir blinkstaal/Black bar or Bright Steel		
5,5 - 11,0	± 0,30	0,50
11,5 - 16,0	± 0,40	0,65
16,5 - 40,0	± 0,50	0,75
42,0 - 50,0	± 1,00	1,60
53,0 - 60,0	± 1,20	2,00
63,0 - 80,0	± 1,40	2,20
83,0 - 100,0	± 1,60	2,40
105,0 - 165,0	± 3,20	4,20

* Ovaliteit is die verskil tussen die maksimum en die minimum diameters van die staaf gemeet by dieselfde dwarsdeursnee.

7.3 KROMMING

Die maksimum kromming van 'n staaf word bereken as:

(i) I- en H- Profiele, Kanale en Hoeke
2,1 x lengte in meter = maksimum kromming (mm)

(ii) Rondstaal en Platstawe
4,2 x lengte in meter = maksimum kromming (mm)

* Ovality is the difference between the maximum and the minimum diameters of the bar measured at the same cross-section.

7.3 STRAIGHTNESS

The straightness tolerance of a bar is calculated as:

(i) I- and H-Sections, Channels and Angles
2,1 x length in metres = maximum tolerance (mm)

(ii) Rounds and Flats
4,2 x length in metres = maximum tolerance (mm)

ALGEMEEN (Vervolg)

7.4 STANDAARD VERSENDINGTOLERANSE
Ten opsigte van elke item behou Yskor die reg voor om te lewer binne die toleransie hieronder gespesifiseer en die item as afgehandel te beskou.

GENERAL (Continued)

7.4 STANDARD DISPATCH TOLERANCES
In respect of each item Iscor reserves the right to supply within the tolerances specified below and to consider the item complete.

MASSA VAN BESTELDE ITEM MASS OF ITEM ORDERED TON(S)	VERSENDINGTOLERANS DISPATCH TOLERANCE
⩽ 2	± 30%
> 2 - 5	± 25%
> 5 - 10	± 20%
> 10 - 20	± 15%
> 20 - 50	± 10%
> 50 - 100	± 7½%
> 100	± 5%

NOTA: Vir beperkings op standaard versendingtolerans verwys na bladsy P1 par. 3.0

NOTE: For restrictions on standard dispatch tolerance see page P1 par. 3.0

7.5 LENGTETOLERANS
Tolerans op gespesifiseerde lengte is - 0 + 50 mm.

7.5 LENGTH TOLERANCE
Tolerance on specified length is - 0 + 50 mm

8.0 BONDELPRAKTYK
Afhangende van profielgrootte en bestelde lengte kan bondelmassa wissel tussen 1,5 - 4 ton. Werklike bondelmassa is op aanvraag beskikbaar.

8.0 BUNDLING PRACTICE
Bundle mass varies between 1,5 - 4 tons and will depend on profile size and ordered length Actual bundle mass is available on request.

DECANCELLED

DECLASSIFIED

S.P.E. 235

YSKOR BEPERK ISCOR LIMITED

WAPENINGSTAAL

REINFORCING STEEL

DECLASSIFIED

YSKOR BEPERK ISCOR LIMITED

DECLASSIFIED

SAP.E.P 239

WAPENINGSTAAL / REINFORCING STEEL

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DECLASSIFIED

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WAPENINGSTAAL / REINFORCING STEEL

GEMEEN / GENERAL

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. Alle pryse is onderworpe aan 'n vereffingsslag van 2½% mits betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. Alle items is onderworpe aan 'n versendingstolerans (Verwys bladsye P1 en S2).

3. All items are subject to dispatch tolerance (Refer pages P1 and S2.)

4. Alle pryse en ekstras hierin kwoteer is per metrieke ton (1 000 kg.) Enige verwysing na die getal lengtes op die faktuur of vragbrief is slegs vir inligting.

4. All prices and extras quoted are per metric ton (1 000 kg.) Any reference to the number of lengths on the invoice or consignment note is for information only.

5. Normale inspeksie en toetsing word uitgevoer en is ingesluit in die spesifikasie ekstra. Wanneer inspeksie en/of bywoning van toetse deur die klant of sy verteenwoordiger vereis word sal die ekstras soos uiteengesit op bladsy P2 gehef word.

5. Normal inspection and testing is carried out and is included in the specification extra. When inspection and witnessing of tests is required by the customer or his representative the extras charged are as outlined on page P2.

6. Pryse en ekstras is die wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.

6. Prices and extras are those ruling on date of dispatch and are subject to change without notice.

7. Yskor behou die reg voor om produkte te voorsien vanaf die Werke van sy keuse.

7. Iscor reserves the right to supply material from the Works of its choice.

1981-07-03

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1980-06-20

DECLASSIFIED

I-2
SPE235

WAPENINGSTAAL/REINFORCING STEEL

A. KONTROLELYS VIR PLASING VAN BESTELLINGS EN NAVRAE

1. ALGEMEEN

(a) Bestemming
  (i) Posadres
    Let Wel: Toets- en analisesertifikate word na hierdie adres gestuur tensy uitdrukklik anders versoek.
  (ii) Afleweringsadres

(b) Aflewering verlang
  (i) Datum
  (ii) Spoorvervoer
  (iii) Padvervoer

2. PRODUK

(a) Beskrywing
(b) Nominale afmetings
  (i) Diameter
  (ii) Lengte
(c) Hoeveelheid (Ton)
  - Totale massa van elke item
(d) Kwaliteit
(e) # Inspeksie verlang - spesifiseer
(f) Sertifisering - tipe sertifikate
(g) Eindgebruike - spesifiseer
(h) Verpakking verlang
  # Kontraknommer moet gespesifiseer word ingeval van SAS-inspeksie

A. CHECK LIST FOR ORDERING AND ENQUIRIES

1. GENERAL

(a) Destination
  (i) Potal Address
    Note: Test and analysis certificates will be forwarded to this address unless specifically stated otherwise.
  (ii) Consigning Adress

(b) Delivery required
  (i) Date
  (ii) Rail Transport
  (iii) Road Transport

2. PRODUCT

(a) Description
(b) Nominal dimensions
  (i) Diameter
  (ii) Length
(c) Quantity (Tons)
  - Total mass of each item
(d) Quality
(e) # Inspection required - specify
(f) Certification - type of certificates
(g) End Uses - specify
(h) Packing required
  # Contract number to be specified in case of SAR-inspection

B. KONTROLELYS VIR PRYSBEPALING

1.0 BASISPRYS

2.0 HOEVEELHEIDSEKSTRAS EN AFTREKKINGS

3.0 BEPERKING OP STANDAARDVERSENDINGSTOLERANS

4.0 LENGTE-EKSTRAS

5.0 PROFIELEKSTRAS

6.0 KWALITEITSEKSTRAS

7.0 VERWERKINGSEKSTRAS

8.0 INSPEKSIE-EKSTRAS

9.0 INVOERHEFFING (R10,25/ton)

B. CHECK LIST FOR PRICING

1.0 BASIS PRICE

2.0 QUANTITY EXTRAS AND DEDUCTIONS

3.0 RESTRICTIONS ON STANDARD DISPATCH TOLERANCE

4.0 LENGTH EXTRAS

5.0 PROFILE EXTRAS

6.0 QUALITY EXTRAS

7.0 PROCESSING EXTRAS

8.0 INSPECTION EXTRAS

8.0 IMPORT LEVY (R10,25/ton)

C. PWV-GEBIED

Bestaande uit die landdrosdikstrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston Johannesburg, Kempton Park, Krugersdorp, Nigel Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonarea and Wonderboom.

1981-07-03

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WAPENINGSTAAL — REINFORCING STEEL

PRYSE/PRICES

1.0 **BASISPRYSE**

1.1 PWV* -gebied v.o.s. Yskorwerke, Pretoria (Sylyn 1143, Cordelfos) plus vervoerkoste R350-00

1.2 Buite PWV*)-gebied: v.o.s. Germiston plus vervoerkoste..... R350-00
*Verwys Kontrolelys bladsy I2 paragraaf C

1.0 **BASIS PRICE**

1.1 PWV* area: f.o.r. Iscor Works, Pretoria (Siding 1143 Cordelfos) plus transport costs..... R350-00

1.2 Outside PWV* area: f.o.r. Germiston plus transport costs..... R350-00
*Refer check list page I2 par. C

2. **HOEVEELHEIDSEKSTRAS EN -AFTREKKINGS PER ITEM**

2.1 Die volgende ekstras en aftrekking is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling uitgereik, ten opsigte van tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

2. **QUANTITY EXTRAS AND DEDUCTIONS PER ITEM**

2.1 The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order in respect of allocated tonnage for dispatch to one destination at Works' convenience.

ITEM MASSA/MASS (TONS)	EKSTRA/EXTRA (R.c.)	AFTREKKING/DEDUCTION (R.c.)
3 ≤ < 5	67-30	
5 ≤ < 10	44-95	
10 ≤ < 20	12-00	
20 ≤ < 40	0-00	0-00
≥ 40		10-00

NOTA:
'n Item word gedefinieer as:
Dieselfde profiel, dieselfde lengte van dieselfde kwaliteit na een bestemming

NOTE:
An item is defined as:
The same profile in the same length and quality to one destination

3.0 **EKSTRA VIR BEPERKING VAN STANDAARD VERSENDINGTOLERANS**
(Verwys bladsy S2 par. 2.4)

(i) 50% beperking van standaard R6-70

(ii) Wanneer 2½% versendingstolerans gespesifiseer word R13-40
(Slegs van toepassing op items onder 100 ton).

3.0 **EXTRA FOR RESTRICTION OF STANDARD DISPATCH TOLERANCE**
(Refer page S2 par. 2.4)

(i) 50% limitation of standard.. R6-70

(ii) When a 2½% dispatch tolerance is specified..... R13-40
(Applicable only to items under 100 tons)

4.0 **LENGTE-EKSTRAS**

4.0 **LENGTH EXTRAS**

LENGTES/ LENGTHS (m)	STANDAARDLENGTE IN TRAPPE VAN 1 m STANDARD LENGTH IN INCREMENTS OF 1 m		NIE-STANDAARDLENGTE IN TRAPPE VAN MINIMUM 10 mm NON-STANDARD LENGTH IN INCREMENTS OF 10 mm MINIMUM	
	INSLUITEND KORT-LENGTES/ INCLUDING SHORT LENGTHS (R.c)	UITSLUITEND KORT LENGTES/ EXCLUDING SHORT LENGTHS (R.c)	INSLUITEND KORT-LENGTES/ INCLUDING SHORT LENGTHS (R.c)	UITSLUITEND KORT-LENGTES/ EXCLUDING SHORT LENGTHS (R.c)
< 9	Op navraag/ On enquiry		Op navraag / On enquiry	
9 - 13	0-00 [1]	13-80	13-80 [1]	27-60
≥ 13 - 18 [3]	13-80 [2]	27-60	27-60 [2]	41-40
≥ 18 - 24 [3]	27-60 [2]	41-40	41-40 [2]	55-20

1) 5% kortlengtes moet aanvaar word vanaf 4 m tot die bestelde lengte.

2) 10% kortlengtes moet aanvaar word vanaf 4 m tot die bestelde lengte.

3) Nie beskikbaar in ronstaal < 16 mm diameter nie.

1) 5% short lengths to be accepted from 4m up to the length ordered.

2) 10% short lengths to be accepted from 4m up to the length ordered.

3) Not available in rounds < 16 mm diameter

QUOTATION

YSKOR BEPERK ISCOR LIMITED

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WAPENINGSTAAL REINFORCING STEEL

5.0 PROFIELEKSTRAS

5.1 Lengtes
Die onderstaande diameters kan in gewone rond en Nostra patroon in 250MPa, 410 MPa en 450 MPa vloeigrens gelewer word.

NOMINALE GROOTTE NOMINAL SIZE (mm)	MASSA/MASS (kg/m)	EKSTRA/EXTRA (R.c.)
8	0,395	92-75
10	0,617	45-75
12	0,888	40-30
16	1,58	28-35
20	2,47	19-35
25	3,85	7-45
32	6,31	10-40
40	9,86	19-35

5.2 Gehaspel

DIAMETER (mm)	MASSA/MASS (kg/m)	EKSTRA/EXTRA (R.c.)
8	0,395	52-45

6.0 KWALITEITEKSTRAS

i) 250 MPa min. vloeigrens R 7-50
ii) 410 en 450 MPa min. vloei-)<25 mm R35-25
iii) grens)≥25 mm R39-50
iv) Ander kwaliteite .....Op navraag

7.0 VERWERKINGEKSTRAS

7.1 Toleranse
(a) Wals tot kleiner toleransies as standaard.....Op navraag
(b) Sny tot kleiner toleransies as standaard.....Op navraag

7.2 Vervormingekstra (slegs 250 MPa) R12-00

8.0 INSPEKSIE-EKSTRAS

8.1 Bywoning van meganiese toetsing deur klant of sy verteenwoordiger..... R 5-00
8.2 Vir elke bykomende instansie wat meganiese toetsing bywoon..... R 9-00
8.3 Inspeksie van produkte deur klant of sy verteenwoordiger..... R 9-00
8.4 Vir elke bykomende instansie wat produkte inspekteer..... R18-00

5.0 PROFILE EXTRAS

5.1 Lengths
The diameters listed below can be supplied in ordinary round and Nostra pattern in 250MPa, 410MPa and 450MPa yield point.

5.2 Coiled

6.0 QUALITY EXTRAS

i) 250 MPa min. yield point R 7-50
ii) 410 and 450 MPa min. yield)<25mm R35-25
iii) point)≥25mm R39-50
iv) Other qualities.....On enquiry

7.0 PROCESSING EXTRAS

7.1 Tolerances
(a) Rolling to tolerances closer than standard..... On enquiry
(b) Cutting to tolerances closer than standard..... On enquiry

7.2 Deformation extra (250 MPa only) R12-00

8.0 INSPECTION EXTRAS

8.1 Witnessing of mechanical testing by customer or his representative.. R 5-00
8.2 For each additional authority witnessing mechanical testing..... R 9-00
8.3 Inspection of products by customer or his representative..... R 9-00
8.4 For each additional inspecting authority..... R18-00

1982-01-01

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1981-07-03A

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WAPENINGSTAAL/REINFORCING STEEL
SPESIFIKASIES/SPECIFICATIONS

1.0 ALGEMEEN

1.1 Spesifikasies waarvolgens produkte voorsien word, word op bladsy P2 aangetoon. Chemiese samestellings waarna verwys word is altyd gietpotanalise en produkanalise is onderhewig aan afwykings volgens aanvaarde internasionale standaarde.

1.2 Gehaspelde Nostra (Stelmor beheerd afgekoel) Word nie aanbeveel vir gebruik in outo s aftol-buigtoerusting nie.

2.0 TOLERANSE

2.1 Lengtetolerans

Tolerans op gespesifiseerde lengte is -0 + 50 mm.

2.2 Massatoleranse

(i) Lentes in gewone rond en Nostra patroon

GROOTTE/SIZE (mm)	AFWYKING IN MASSA/VARIANCE IN MASS (%)	
	* LOT/BATCH	** ENKELSTAAF/INDIVIDUAL BAR
⩽10	+ 4,5 - 3,5	± 6,0
12 - 40	± 2,5	± 4,0

* Hieronder word verstaan die afwyking tussen die werklike massa voorsien (per vragmotor/trokvrag) en die nominale massa soos bereken vanaf lengtes voorsien.

** Hieronder word verstaan die afwyking tussen die werklike eenheidsmassa en die nominale eenheidsmassa.

(ii) Nostrahaspels

Soos vir "ENKELSTAAF" in (i) hierbo.

2.3 Dimensionele toleranse

(Slegs gehaspelde gewone rond)

NOMINALE/NOMINAL DIAMETER (mm)	TOELAATBARE AFWYKING IN/PERMISIBLE VARIANCE IN	
	DIAMETER (mm)	MAKS. OVALITEIT/MAX. OVALITY (mm)
5,5 - 13,0	±0,40	0,65

1.0 GENERAL

1.1 Specifications to which products are supplied are listed on page P2. Chemical compositions referred to are always ladle analyses and product analysis is subject to deviations in accordance with accepted international standards.

1.2 Coiled Nostra (Stelmor control coolled) Not recommended for use in outomatic decoiling-bending equipment.

2.0 TOLERANCES

2.1 Length Tolerance

Tolerance on specified length is - 0 + 50 mm

2.2 Mass Tolerances

(i) Plain rounds and Nostra patvern in lengths.

* This is defined as the variance between actual mass supplied (per truck/lorry load) and the mass as calculated from the nominal mass and length supplied.

** This is defined as the variance between actual unit mass and nominal unit mass.

(ii) Coiled Nostra

As for "INDIVIDUAL BAR" in (i) above.

2.3 Dimensional tolerances

(Plain rounds only)

TOLERANSE (vervolg) TOLERANCES (continued)

2.4 Standaard Versending tolerans
Ten opsigte van elke item behou Yskor die reg voor om te lewer binne die toleranse hieronder gespesifiseer en die item as afgehandel te beskou.

2.4 Standard dispatch tolerance
In respect of each item Iscor reserves the right to supply within the tolerances specified below and to consider the item complete.

MASSA VAN BESTELDE ITEM MASS OF ITEM ORDERED (TON/TONS)	VERSENDING TOLERANS DISPATCH TOLERANCE
⩽ 2	±30%
> 2 - 5	±25%
> 5 - 10	±20%
>10 - 20	±15%
>20 - 50	±10%
>50 - 100	±7½%
>100	± 5%

NOTA:
Vir beperkings op standaard versendingtolerans verwys na bladsy P1 par. 3.0

NOTE:
For restrictions on standard dispatch tolerance see page P1 par. 3.0.

3.0 BONDELPRAKTYK
Afhangende van profielgrootte en bestelde lengte kan bondelmassa wissel tussen 1,5 - 4 ton. Werklike bondelmassa is op aanvraag beskikbaar.

3.0 BUNDLING PRACTICE
Bundle mass varies between 1,5-4 tons and will depend on profile size and ordered length. Actual bundle mass is available on request

4.0 NOSTRA PATROONSPESIFIKASIE
Op aanvraag beskikbaar.

4.0 NOSTRA PATTERN SPECIFICATION
Available on request.

5.0 MASSA EN AFMETINGS VAN HASPELS

5.0 MASS AND DIMENSIONS OF COILS

	NEWCASTLE	PRETORIA
	5,5-13,0 mm	5,5-10,5 mm
Gemiddelde massa Average mass (kg)	1 680	680
Maksimum binnediameter Maximum inside diameter (mm)	800	800
Maksimum buitediamter Maximum outside diameter (mm)	1 250	1 150
Maksimum hoogte Maximum height (mm)	1 250	2 000(a)
Vir 95% van bestelde massa For 95% of ordered mass	1 250- 1 750 kg	580- 700 kg
Vir 5% van bestelde massa For 5% of ordered mass	300- 1 250 kg	300- 580 kg

NOTA:
a) 680 kg Haspels vanaf Pretoria word saam gebondel in pakke van 3.
b) Alle ander haspels is normaalweg enkel.

NOTE:
a) 680 kg Coils from Pretoria are bundled in stacks of 3.
b) All other coils are normally single.

GEKANSELLEER

DECLASSIFIED

S.P.E. 240

YSKOR BEPERK ISCOR LIMITED

SPOORSTAWE

RAILS

0010307030

SPOORSTAAL

INHOUDSOPGAWE

REGISTER

RAILS

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REGISTER

SPOORSTAWE/RAILS
ALGEMEEN/GENERAL

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.%.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

3. Alle items is onderworpe aan 'n versendingstolerans (Verwys bladsye P1 en S2)

4. Alle pryse en ekstras hierin kwoteer is per metriese ton (1000 kg). Fakturering geskied op die basis van nominale massa.

5. Normale inspeksie en toetsing word uitgevoer en is ingesluit by die spesifikasie ekstra. Wanneer inspeksie en bywoning van toetse deur die klant of sy verteenwoordiger vereis word sal die ekstras soos uiteengesit op bladsy P2 gehef word.

6. Pryse en ekstras is die wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.

7. Yskor behou die reg voor om produkte te voorsien vanaf die Werke van sy keuse.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. All items are subject to a dispatch tolerance (Refer pages P1 and S2).

4. All prices and extras quoted are per metric ton (1000 kg). Invoicing is based on nominal mass.

5. Normal inspection and testing is carried out and is included in the specification extra. When inspection and witnessing of tests is required by the customer or his representative, the extras charged are as outlined on page P2.

6. Prices and extras are those ruling on date of dispatch, and are subject to change without notice.

7. Iscor reserves the right to supply material from the Works of its choice.

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SPOORSTAAF

A. KONTROLELYS VIR PLASING VAN BESTELLINGS EN NAVRAE

1. ALGEMEEN

(a) Bestemming
  (i) Posadres
    Let Wel: Toets- en analisesertifikate word na hierdie adres gestuur tensy, uitdruklik anders versoek.
  (ii) Afleweringsadres
(b) Aflewering verlang
  (i) Datum
  (ii) Spoorvervoer
  (iii) Padvervoer

2. PRODUK

(a) Beskrywing
(b) Lengte
(c) Gatspasiëring/grootte
(d) Hoeveelheid (Ton)
  Totale massa van elke item
(e) Kwaliteit
  * Inspeksie verlang - spesifiseer
(f) Sertifisering - tipe sertifikate
  * Kontrak no. moet gespesifiseer word ingeval van SAS-inspeksie

B. KONTROLELYS VIR PRYSBEPALING

1. Basispryse
2. Hoeveelheidekstras en -aftrekkings per item
3. Beperking ekstra op standaard versendingstolerans
4. Lengte ekstras
5. Profielekstras
6. Kwaliteitekstras
7. Saagekstras
8. Verwerkingekstras
9. Inspeksie ekstras
10. Invoerheffing (R10,25/ton)

C. PWV-GEBIED

Bestaande uit die Landdrosdistrikte van Alberton, Alexandra dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

RAILS

A. CHECK LIST FOR ORDERS AND ENQUIRIES

1. GENERAL

(a) Destination
  (i) Postal Address
    Note: Test and analysis certificates will be forwarded to this address unless specifically dated otherwise.
  (ii) Consignment Address
(b) Delivery required
  (i) Date
  (ii) Rail Transport
  (iii) Road Transport

2. PRODUCT

(a) Designation
(b) Length
(c) Hole spacing/size
(d) Quantity (Tons)
  Total mass of each item
(e) Quality
  * Inspection required - specify
(f) Certification - type of certificates
  * Contract no. to be specified in case of SAR-inspection

B. CHECK LIST FOR PRICING

1. Basis Prices
2. Quantity extras and deduction per item
3. Restriction extra on standard dispatch tolerance
4. Length extras
5. Profile extras
6. Quality extras
7. Cutting extras
8. Processing extras
9. Inspection extras
10. Import levy (R10,25/ton)

C. PWV AREA

Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

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DESTROYED

SPOORSTAWE — RAILS

PRYSE
PRICES

1.0 BASISPRYS R402-00

1.1 PWV*-gebied: v.o.s. Yskorwerke, Pretoria (Sylyn 1143, Cordelfos) plus vervoerkoste.

1.2 Buite PWV*-gebied: v.o.s. Germiston plus vervoerkoste.

*) Verwys Kontrolelys bladsy I2 par. C

2.0 HOEVEELHEIDEKSTRAS EN AFTREKKINGS PER ITEM

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigings-bestelling deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

ITEM MASSA/MASS (TON)S	EKSTRA EXTRA (R.c.)	AFTREKKING DEDUCTION (R.c.)
40 -< 100	19-25	
100 -< 200	8-05	
200 -< 500	0-00	0-00
500 -<1000		3-60
⩾1000		7-20

NOTA:
'n Item word gedefineer as:
Dieselfde profiel, dieselfde lengte van dieselfde kwaliteit na een bestemming.

3.0 EKSTRA VIR BEPERKING VAN STANDAARDVERSENDINGS-TOLERANS (Verwys bladsy S2 par. 4.4)

(i) 50% van standaard R6-70

(ii) Wanneer 'n 2½% versendingtolerans gespesifiseer word ..... R13-40 (Slegs van toepassing op items onder 100 ton).

(iii) Presiese hoeveelheid .....Op navraag

4.0 LENGTE EKSTRAS

AANGEDUIDE MASSA/ DESIGNATED MASS (kg/m)	LENGTES * LENGTHS * (m)	EKSTRA/ EXTRA (RAND)
57, 48, 40, 30	9; 12; 18	)
22	9	) R17-40
15	5,5; 7,5	)
10	5,5	)

* Ander lengtes ..... Op navraag

NOTA:
'n Afslag van R17-40 op bogenoemde lengte-ekstras geld indien ten opsigte van:

(i) bestelde lengtes tot 13,5 m, 'n maksimum van 7½% volgens massa van die bestelde hoeveelheid in kortlengtes van 3m tot 1m korter as bestelde lengte, voorsien kan word.

(ii) bestelde lengtes oor 13,5 m, 'n maksimum van 12½% volgens massa van die bestelde hoeveelheid in kortlengtes van 3m tot 1m korter as bestelde lengte, voorsien kan word.

Klante moet minstens vier kortlengtes van hulle keuse spesifiseer en aan Yskor voorlê vir goedkeuring.

1.0 BASIS PRICE R402-00

1.1 PWV* area: f.o.r. Iscor Works, Pretoria (Siding 1143 Cordelfos) plus transport cost.

1.2 Outside PWV*-area: f.o.r. Germiston plus transport cost.

*) Refer Check List page I2 par. C

2.0 QUANTITY EXTRAS AND DEDUCTIONS PER ITEM

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

NOTE:
An item is defined as:
The same profile in the same length and quality to one destination

3.0 EXTRA FOR RESTRICTION OF STANDARD DISPATCH TOLERANCE (Refer page S2 par. 4.4)

(i) 50% limitation on standard R6-70

(ii) When a 2½% dispatch tolerance is specified ..... R13-40 (Applicable only to items under 100 tons)

(iii) Exact count .....On enquiry

4.0 LENGTH EXTRAS

* Other lengths ..... On enquiry

NOTE:
A deduction of R17-40 from the above length extras applies if in respect of:

(i) ordered lengths up to 13,5 m, a maximum of 7½% by mass of the quantity ordered may be supplied in short lengths of 3 m up to 1 m shorter than the lengths ordered.

(ii) ordered lengths over 13,5 m a maximum of 12½% by means of the quantity ordered may be supplied in short lengths of 3m up to 1m shorter than the lengths ordered.

Customers should specify at least four short lengths of their choice and submit to Iscor for approval.

AANGEDUIDE MASSA/ DESIGNATED MASS kg/m	EKSTRA/EXTRA R. c.
57	12-10
48	0-00
40	16-05
30	20-05
22	39-25
15	66-50
10	84-95

6.0 KWALITEITEKSTRAS
6.1 Myne en Handel..... R0-00

6.2 Gespesifiseerde kwaliteit..... Op navraag

7.0 SAAGEKSTRAS
Saag tot kleiner toleransies as die standaardtoleransie (sien bladsy S2 par. 4.3) R6-30

8.0 VERWERKINGEKSTRAS
8.1 Boor/pons van ander gate as standaardgate..... Op navraag
8.2 Wals tot kleiner toleransies as standaard..... Op navraag

9.0 INSPEKSIE-EKSTRAS
9.1 Bywoning van meganiese toetsing deur klant of sy verteenwoordiger R5-00
9.2 Vir elke bykomende instansie wat meganiese toetsing bywoon..... R9-00
9.3 Inspeksie van produkte deur klant of sy verteenwoordiger R9-00
9.4 Vir elke bykomende instansie wat produkte inspekteer..... R18-00

6.0 QUALITY EXTRAS
6.1 Mines and Commercial..... R0-00

6.2 Specified quality ..... On enquiry

7.0 CUTTING EXTRAS
Cuttin to closer than standard tolerance (see page S2 par. 4.3) R6-30

8. PROCESSING EXTRAS
8.1 Drilling/punching of holes other than standard..... On enquiry
8.2 Rolling to tolerances closer than normal ..... On enquiry

9.0 INSPECTION EXTRAS
9.1 Witnessing of mechanical testing by customer or his representative R5-00
9.2 For each additional authority witnessing mechanical testing..... R9-00
9.3 Inspection of products by customer or his representative R9-00
9.4 For each additional inspecting authority..... R18-00

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GEDRUKTE

SPOORWEGRELS

SPESIFIKASIES/SPECIFICATIONS

1.0 ALGEMEEN

1.1 Spore word gewals in 'n kwaliteit geskik vir die eindgebruik.

1.2 Geen toets en analise sertifikate word normaalweg voorsien nie.

1.0 GENERAL

1.1 Rails are rolled from a quality suitable for the end use.

1.2 No analysis and test certificates are normally supplied.

2.0 MASSA EN AFMETINGS

AANDUIDENDE MASSA DESIGNATED MASS (kg/m)	NOMINALE BEREKENDE MASSA NOMINAL CALCULATED MASS (kg/m)	* AFMETINGS VOLGENS TEKENING NR. * DIMENSIONS ACCORDING TO DRAWING NO
57	57,37	RD - R - 939
48	47,60	RD - R - 940
40	40,31	HM - R - 509
30	30,15	HM - R - 447
22	22,37	SL - R - 54
15	14,87	SL - R - 55
10	9,92	SL - R - 57

* Afskrifte van tekeninge is aangeheg.

2.0 MASS AND DIMENSIONS

* Copies of drawings are attached.

3.0 STANDAARD LENGTES EN SPASIËRING VAN GATE

AANDUIDENDE MASSA/ DESIGNATED MASS (kg/m)	STANDAARDLENGTES STANDARD LENGTHS (m)	STANDAARD GATE / STANDARD HOLES		
		GETAL NUMBER	DIAMETER DIAMETER (mm)	AFSTAND TUSSEN MIDDELPUNTE VAN GATE DISTANCE BETWEEN CENTRES OF HOLES (mm)
57	9, 12, 18	4	35	100
48	9, 12, 18	4	32	100
40	9, 12, 18	4 of/or 6	26, 29	101,6
30	9, 12, 18	4 of/or 6	23, 26, 27	101,6 127,0
22	9	4	23	101,6 127,0
15	5,5; 7,5	4	20	88,9 101,6
10	5,5	4	16	76,2 88,9; 101,6

3.0 STANDARD LENGTHS AND SPACING OF HOLES

4.0 BEGINAFSTAND

"Beginafstand" word omskryf as die afstand van ent van spoorstaaf tot middelpunt van die gat naaste aan die ent van die spoor.

4.1 57 en 48 kg/m
Begin afstand 67 mm

4.2 40, 30, 22, 15 en 10 kg/m
Beginafstand is gelyk aan helfte van die afstand tussen die middelpunte van gate, minus 3,2 mm.

NOTA:
Alle gate is rond en geboor, behalwe in die geval van 10,15 en 22 kg spoorstawe waar hulle rond maar gepons is.

4.0 STARTING DISTANCE

"Starting Distance" is defined as the distance from end of the rail to the centre of the hole nearest to the end of the rail.

4.1 57 and 48 kg/m
Starting distance 67 mm

4.2 40, 30, 22, 15 and 10 kg/m
Starting distance is equal to half the distance between centres of holes, less 3,2 mm.

NOTE:
All holes are round and drilled except in 10,15 and 22 kg rails, where they are round but punched.

UNCONTROLLED

4.0 TOLERANSE

4.1 Dimensionele toleranse

AFMETING/DIMENSION (mm)	TOLERANS/TOLERANCE (mm)
Hoogte van spoorstaaf/ Height of Rail	+1,0 - 0,5
Totale wydte van basis/ Total width of base	±1,6
Wydte van kop/ Width of head	±1,2
Dikte van web/ Thickness of web	±0,8

NOTA:

i) Die sjabloon vir die lasholte mag nie meer as 2,0 mm na die kante uitstaan nie.

ii) Toleranse hierbo is slegs van toepassing op spore 30 kg/m

4.2 Massatoleranse

Word nie gespesifiseer nie.

4.3 Lengtetoleranse

(i) Spore 30 kg/m - 57 kg/m: Ente word gefrees en gesaag tot 'n lengtetolerans van ± 5,0 mm.

(ii) Spore 10 kg/m - 22 kg/m: Ente word warmgesaag tot 'n lengtetoleransie van ± 20 mm.

4.4 Standaard Versendingtolerans

Ten opsigte van elke item behou Yskor die reg voor om te lewer binne die toleranse hieronder gespesifiseer en die item as afgehandel te beskou.

MASSA VAN BESTELDE ITEM MASS OF ITEM ORDERED (TON/TONS)	VERSENDINGTOLERANS DISPATCH TOLERANCE
40 - <100	±10%
≥100	± 5%

NOTA:

Vir beperkings oo standaard versendingtolerans verwys na bladsy P1 par. 3.0

4.0 TOLERANCES

4.1 Dimensional Tolerances

NOTE:

i) The finishing template may not stand out more than 2,0 mm laterally.

ii) Tolerances above are applicable to rails 30 kg/m only.

4.2 Mass Tolerance

Not specified.

4.3 Length Tolerances

(i) Rails 30 kg/m - 57 kg/m: Ends are milled or sawn to a length tolerance of ± 5,0 mm.

(ii) Rails 10 kg/m - 22 kg/m: Ends are hot sawn to a length tolerance of ±20 mm.

4.4 Standard Dispatch Tolerance

In respect of each item Iscor reserves the right to supply within the tolerances specified below and to consider the item complete.

NOTE:

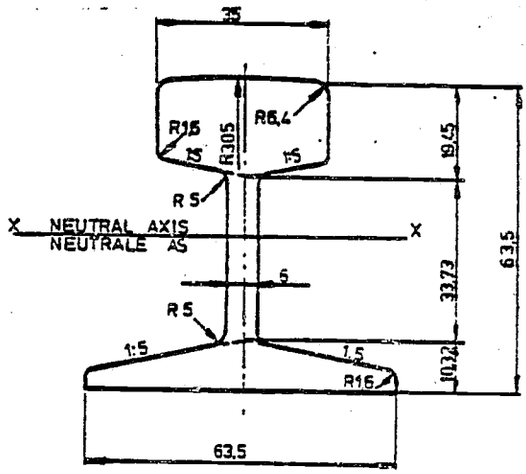
For restrictions on standard dispatch tolerance see page P1 par. 3.0

DECLASSIFIED

SPOORSTAWWE/RAILS

9,92 kg (10 kg/m)
TEKENING SL-R-57
(Nie volgens skaal nie)

9,92 kg (10 kg/m)
DRAWING SL-R-57
(Not to scale)



SNITOPPERVLAKTE VAN KOP AREA OF CROSS-SECTION OF HEAD	0,592	10^{-3} m^2
SNITOPPERVLAKTE VAN WEB AREA OF CROSS-SECTION OF WEB	0,220	10^{-3} m^2
SNITOPPERVLAKTE VAN BASIS AREA OF CROSS-SECTION OF BASE	0,453	10^{-3} m^2
TOTALE SNITOPPERVLAKTE TOTAL AREA OF CROSS-SECTION	1,265	10^{-3} m^2
TWEEDE MOMENT VAN OPPERVLAKTE X-X SECOND MOMENT OF AREA X-X	0,7075	10^{-6} m^4
TWEEDE MOMENT VAN OPPERVLAKTE Y-Y SECOND MOMENT OF AREA Y-Y		
PROFIELMODULUS OM X-X : MINIMUM SECTION MODULUS ABOUT X-X : MINIMUM	22,29	10^{-6} m^3
PROFIELMODULUS OM X-X : MAKSIMUM PROFILE MODULUS ABOUT X-X : MAXIMUM	22,29	10^{-6} m^3
BEREKENDE MASSA CALCULATED MASS	9,92	kg/m

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DECLASSIFIED

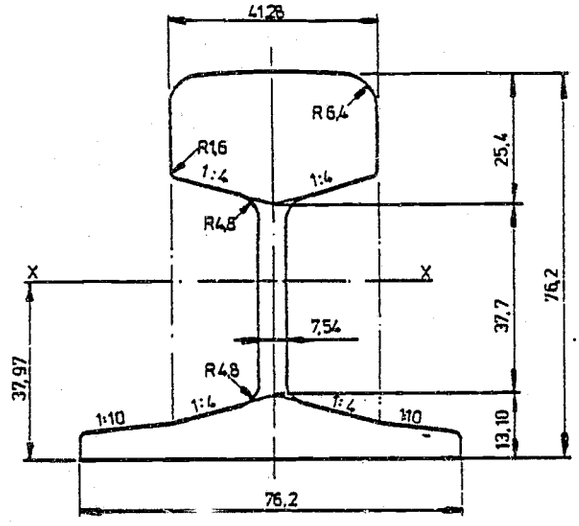
S4
SPE240

YSKOR BEPERK ISCOR LIMITED

SPOORSTAWE/RAILS

14,87 kg (15 kg/m)
TEKENINGE SL-R-55
(Nie volgens skaal nie)

14,87 kg (15 kg/m)
DRAWING SL-R-55
(Not to scale)



SNITOPPERVLAKTE VAN KOP AREA OF CROSS-SECTION OF HEAD	0,916 10^{-3} m^2
SNITOPPERVLAKTE VAN WEB AREA OF CROSS-SECTION OF WEB	0,303 10^{-3} m^2
SNITOPPERVLAKTE VAN BASIS AREA OF CROSS-SECTION OF BASE	0,677 10^{-3} m^2
TOTALE SNITOPPERVLAKTE TOTAL AREA OF CROSS-SECTION	1,896 10^{-3} m^2
TWEEDE MOMENT VAN OPPERVLAKTE X-X SECOND MOMENT OF AREA X-X	1,486 10^{-6} m^4
TWEEDE MOMENT VAN OPPERVLAKTE Y-Y SECOND MOMENT OF AREA Y-Y	- -
PROFIELMODULUS OM X-X : MINIMUM SECTION MODULUS ABOUT X-X : MINIMUM	38,84 10^{-6} m^3
PROFIELMODULUS OM X-X : MAKSIMUM PROFILE MODULUS ABOUT X-X : MAXIMUM	39,17 10^{-6} m^3
BEREKENDE MASSA CALCULATED MASS	14,9 kg/m

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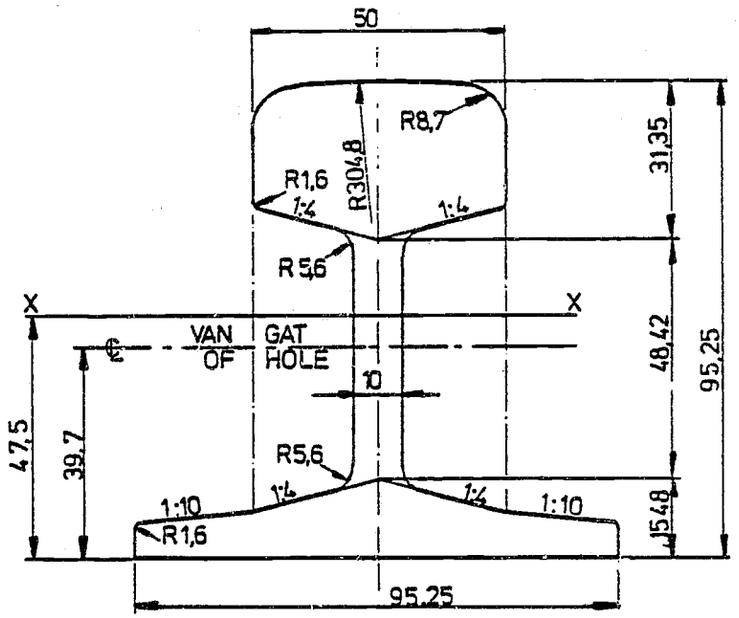
DECLASSIFIED

SPOORSTAWE/RAILS

22,37 kg (22 kg/m)
TEKENINGE SL-R-54
(Nie volgens skaal nie)

22,37 kg (kg/m)
DRAWING SL-R-54
(Not to scale)



SNITOPPERVLAKTE VAN KOP AREA OF CROSS-SECTION OF HEAD	1,368	10^{-3} m^2
SNITOPPERVLAKTE VAN WEB AREA OF CROSS-SECTION OF WEB	0,510	10^{-3} m^2
SNITOPPERVLAKTE VAN BASIS AREA OF CROSS-SECTION OF BASE	0,981	10^{-3} m^2
TOTALE SNITOPPERVLAKTE TOTAL AREA OF CROSS-SECTION	2,859	10^{-3} m^2
TWEEDE MOMENT VAN OPPERVLAKTE X-X SECOND MOMENT OF AREA X-X	3,475	10^{-6} m^4
TWEEDE MOMENT VAN OPPERVLAKTE Y-Y SECOND MOMENT OF AREA Y-Y	-	-
PROFIELMODULUS OM X-X : MINIMUM SECTION MODULUS ABOUT X-X : MINIMUM	72,76	10^{-6} m^3
PROFIELMODULUS OM X-X : MAKSIMUM PROFILE MODULUS ABOUT X-X : MAXIMUM	73,09	10^{-6} m^3
BEREKENDE MASSA CALCULATED MASS	22,4	kg/m

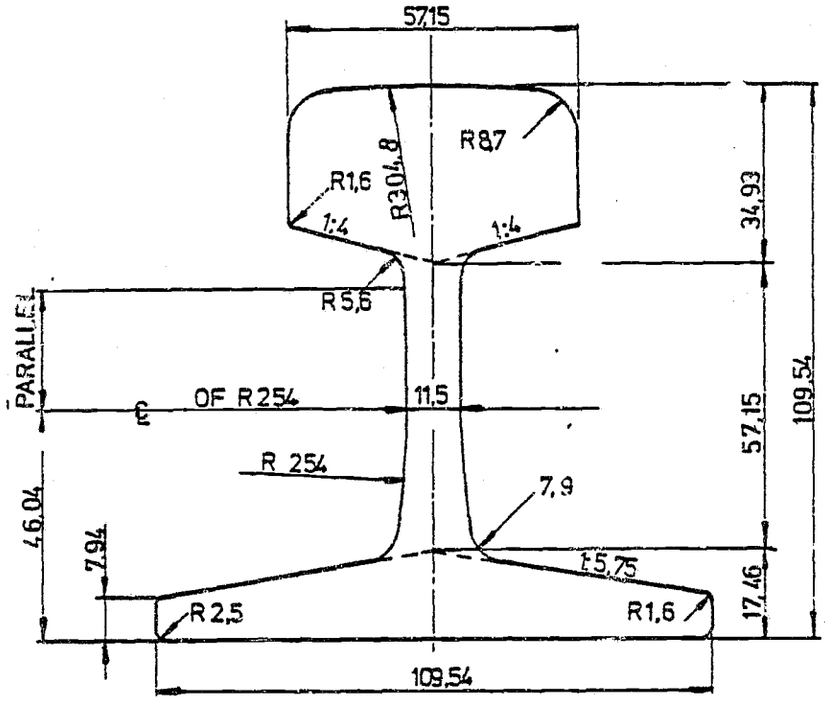
DECLASSIFIED

YSKOR BEPERK ISCOR LIMITED

SPOORSTAWE/RAILS

30,15 kg (30 kg/m)
TEKENING HM-R-447
(Nie volgens skaal nie)

30,15 kg (30 kg/m)
DRAWING HM-R-447
(Not to scale)



SNITOPPERVLAKTE VAN KOP AREA OF CROSS-SECTION OF HEAD	1,735	10^{-3} m^2
SNITOPPERVLAKTE VAN WEB AREA OF CROSS-SECTION OF WEB	0,729	10^{-3} m^2
SNITOPPERVLAKTE VAN BASIS AREA OF CROSS-SECTION OF BASE	1,387	10^{-3} m^2
TOTALE SNITOPPERVLAKTE TOTAL AREA OF CROSS-SECTION	3,851	10^{-3} m^2
TWEEDE MOMENT VAN OPPERVLAKTE X-X SECOND MOMENT OF AREA X-X	6,268	10^{-6} m^4
TWEEDE MOMENT VAN OPPERVLAKTE Y-Y SECOND MOMENT OF AREA Y-Y	-	-
PROFIELMODULUS OM X-X : MINIMUM SECTION MODULUS ABOUT X-X : MINIMUM	110,9	10^{-6} m^3
PROFIELMODULUS OM X-X : MAKSIMUM PROFILE MODULUS ABOUT X-X : MAXIMUM	118,2	10^{-6} m^3
BEREKENDE MASSA CALCULATED MASS	30,2	kg/m

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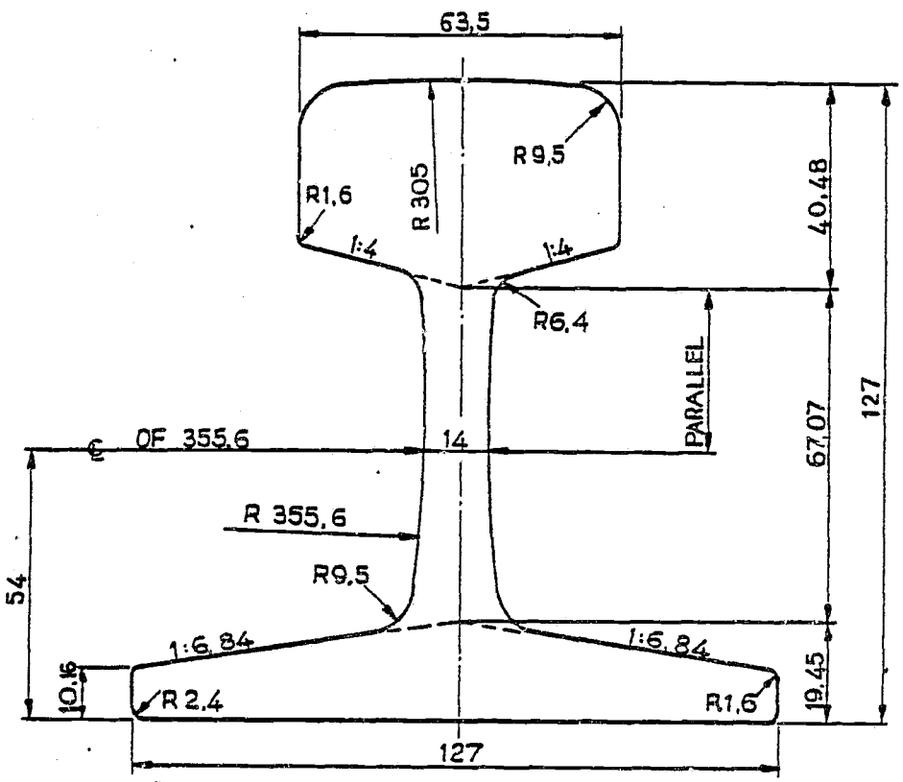
GEKLASSIFISEER

SPOORSTAWE/RAILS

40,31 kg (40 kg/m)
TEKENINGE HM-R-509
(Nie volgens skaal nie)

40,31 kg (40 kg/m)
DRAWING HM-R-509
(Not to scale)



SNITOPPERVLAKTE VAN KOP AREA OF CROSS-SECTION OF HEAD	2,252	10^{-3} m^2
SNITOPPERVLAKTE VAN WEB AREA OF CROSS-SECTION OF WEB	1,026	10^{-3} m^2
SNITOPPERVLAKTE VAN BASIS AREA OF CROSS-SECTION OF BASE	1,877	10^{-3} m^2
TOTALE SNITOPPERVLAKTE TOTAL AREA OF CROSS-SECTION	5,155	10^{-3} m^2
TWEEDE MOMENT VAN OPPERVLAKTE X-X SECOND MOMENT OF AREA X-X	1,114	10^{-6} m^4
TWEEDE MOMENT VAN OPPERVLAKTE Y-Y SECOND MOMENT OF AREA Y-Y	-	-
PROFIELMODULUS OM X-X : MINIMUM SECTION MODULUS ABOUT X-X : MINIMUM	167,2	10^{-6} m^3
PROFIELMODULUS OM X-X : MAKSIMUM PROFILE MODULUS ABOUT X-X : MAXIMUM	184,5	10^{-6} m^3
BEREKENDE MASSA CALCULATED MASS	40,3	kg/m

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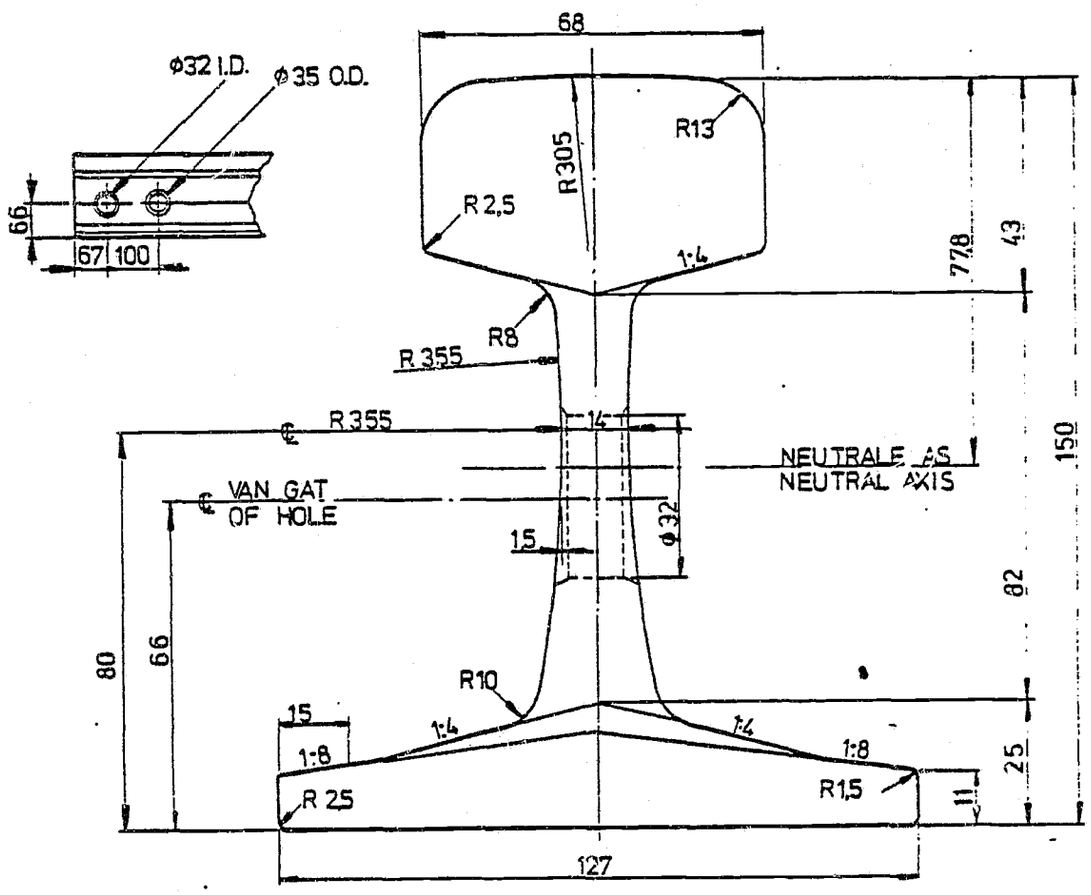
GEKLASSIFISEER

YSKOR BEPERK ISCOR LIMITED

SPOORSTAWE/RAILS

47,6 kg (48 kg/m)
TEKENING RD-R-940
(Nie volgens skaal nie)

47,6 kg (48 kg/m)
DRAWING RD-R-940
(Not to scale)



SNITOPPERVLAKTE VAN KOP AREA OF CROSS-SECTION OF HEAD	2,51	10^{-3} m^2
SNITOPPERVLAKTE VAN WEB AREA OF CROSS-SECTION OF WEB	1,43	10^{-3} m^2
SNITOPPERVLAKTE VAN BASIS AREA OF CROSS-SECTION OF BASE	2,14	10^{-3} m^2
TOTALE SNITOPPERVLAKTE TOTAL AREA OF CROSS-SECTION	6,08	10^{-3} m^2
TWEEDE MOMENT VAN OPPERVLAKTE X-X SECOND MOMENT OF AREA X-X	18,22	10^{-6} m^4
TWEEDE MOMENT VAN OPPERVLAKTE Y-Y SECOND MOMENT OF AREA Y-Y	-	-
PROFIELMODULUS OM X-X : MINIMUM SECTION MODULUS ABOUT X-X : MINIMUM	234	10^{-6} m^3
PROFIELMODULUS OM X-X : MAKSIMUM PROFILE MODULUS ABOUT X-X : MAXIMUM	255	10^{-6} m^3
BEREKENDE MASSA CALCULATED MASS	47,6	kg/m

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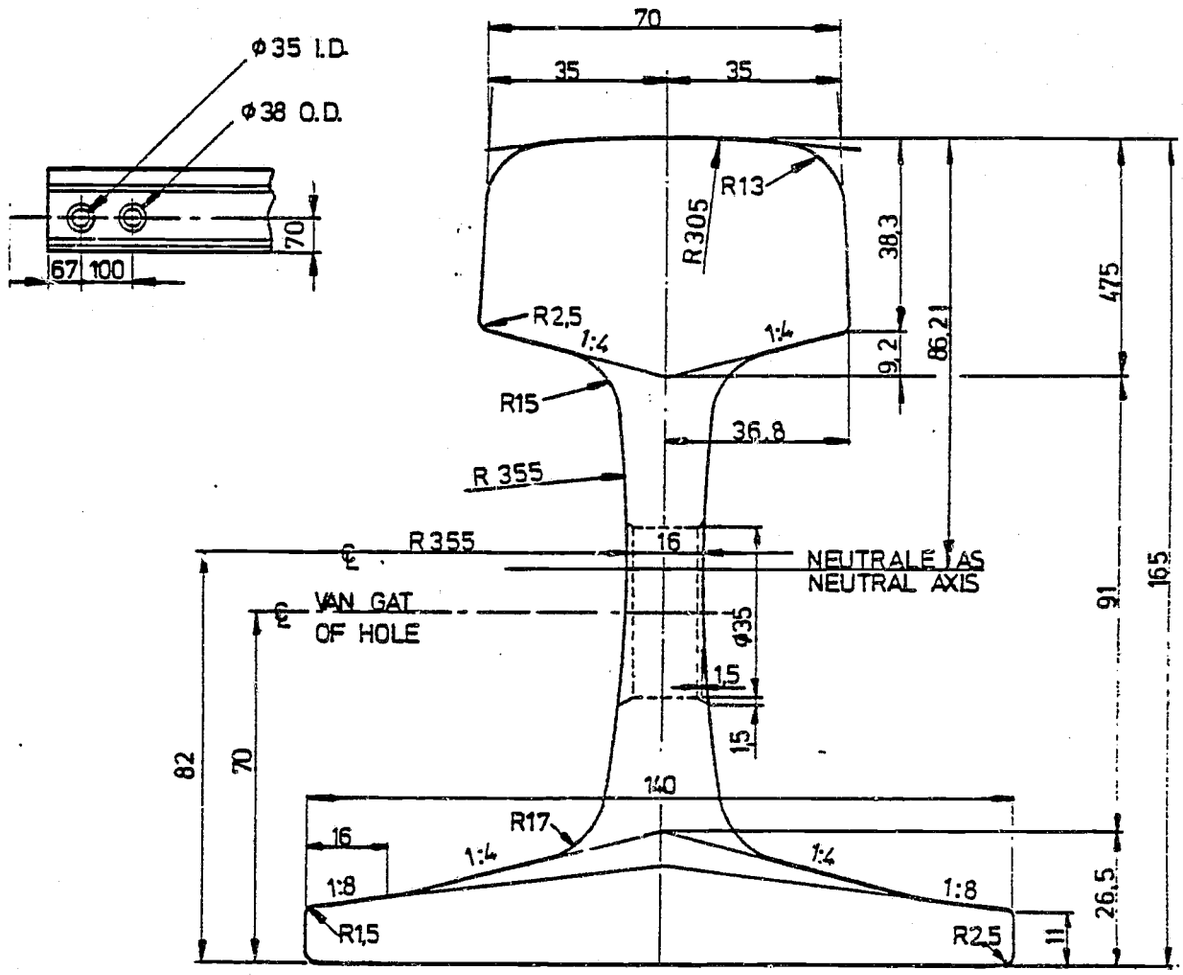
YSKOR BEPERK ISCOR LIMITED

SPOORSTAWE/RAILS

57,37 kg (57 kg/m)
TEKENING RD-R-930
(Nie volgens skaal nie)

57,37 kg (57 kg/m)
DRAWING RD-R-939
(Not to scale)



SNITOPPERVLAKTE VAN KOP AREA OF CROSS-SECTION OF HEAD	3,043	10^{-3} m^2
SNITOPPERVLAKTE VAN WEB AREA OF CROSS-SECTION OF WEB	1,686	10^{-3} m^2
SNITOPPERVLAKTE VAN BASIS AREA OF CROSS-SECTION OF BASE	2,595	10^{-3} m^2
TOTALE SNITOPPERVLAKTE TOTAL AREA OF CROSS-SECTION	7,324	10^{-3} m^2
TWEEDE MOMENT VAN OPPERVLAKTE X-X SECOND MOMENT OF AREA X-X	26,51	10^{-6} m^4
TWEEDE MOMENT VAN OPPERVLAKTE Y-Y SECOND MOMENT OF AREA Y-Y	4,42	10^{-6} m^4
PROFIELMODULUS OM X-X : MINIMUM SECTION MODULUS ABOUT X-X : MINIMUM	307,5	10^{-6} m^3
PROFIELMODULUS OM X-X : MAKSIMUM PROFILE MODULUS ABOUT X-X : MAXIMUM	336,5	10^{-6} m^3
BEREKENDE MASSA CALCULATED MASS	57,4	kg/m

1981-07-03

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1977-04-01

DECLASSIFIED

S.P.E. 250

YSKOR BEPERK ISCOR LIMITED

VENSTERPROFIELE

WINDOW SECTIONS

0310307030

VENSTERPROFIELE • WINDOW SECTIONS

ALGEMEEN / GENERAL

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2½%, mits betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

3. Alle items is onderworpe aan 'n versendingstolerans (verwys bladsye P1 en S1)

4. Alle pryse en ekstras hierin kwoteer, is per metrieke ton. (1 000 kg) Enige verwysing na die getal lengtes op die faktuur of vragbrief is slegs vir inligting.

5. Pryse en ekstras is die wat op die verseendings=datum geld en is onderworpe aan verandering sonder kennisgewing.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2½%, provided payment is made in accordance with our General Conditions of Sale.

3. All items are subject to a dispatch tolerance (Refer pages P1 and S1)

4. All prices and extras quoted are per metric ton. (1 000 kg.) Any reference to the number of lengths on the invoice or consignment note is for information only.

5. Prices and extras are those ruling on date of dispatch, and are subject to change without notice.

1981-07-03 — Kanselleer en vervang uitgawe gedateer / Cancels and supersedes issue dated — 1980-06-20

UNRESTRICTED

VENSTERPROFIELE / WINDOW SECTIONS

A. **KONTROLELYS VIR PLASING VAN BESTELLINGS EN NAVRAE**

1. **ALGEMEEN**

(a) Bestemming
- (i) Posadres
- (ii) Afleweringsadres

(b) Aflewering verlang
- (i) Datum
- (ii) Spoorvervoer
- (iii) Padvervoer

2. **PRODUK**

(a) Beskrywing

(b) Hoeveelheid (ton)
- Totale massa van elke item

B. **KONTROLE VIR PRYSBEPALING**

1. Basisprys
2. Hoeveelheidsekstra en- aftrekking per item
3. Beperking op standaard:versendingstolerans
4. Invoerheffing (R10,25/ton)

C. **PWV-GEBIED**

Bestaande uit die landdrosdistrikte van Alberton, Alexandra dorpsgebied, Benoni Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark Vereeniging, Westonaria en Wonderboom.

A. **CHECK LIST FOR ORDERING AND ENQUIRIES**

1. **GENERAL**

(a) Destination
- (i) Postal address
- (ii) Consignment address

(b) Delivery required
- (i) Date
- (ii) Rail transport
- (iii) Road transport

2. **PRODUCT**

(a) Description

(b) Quantity (tons)
- Total mass of each item

B. **CHECK LIST FOR PRICING**

1. Basis Price
2. Quantity extras and deductions per item
3. Restriction on standard dispatch tolerance
4. Import levy (R10,25/ton)

C. **PWV-AREA**

Consisting of the magisterial districts of Alberton, Alexandra dorpsgebied, Benoni Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark Vereeniging, Westonaria and Wonderboom.

DECLASSIFIED

GEKLASSIFISEER

VENSTERPROFIELE

1.0 **BASISPRYSE**

1.1 PWV[1])-gebied:
v.o.s. Yskorwerke, Pretoria, (Sylyn 1143, Cordelfos) plus vervoerkoste

1.2 Buite PWV[1])-gebied: pryse per 1 000 kg v.o.s. Germiston plus vervoerkoste

[1]) Verwys Kontrolelys bladsy I2 par. C

2. **HOEVEELHEIDSEKSTRAS/AFTREKKINGS PER ITEM**

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigings-bestelling deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

WINDOW SECTIONS

1.0 **BASIS PRICES**

1.1 PWV[1]) area:
f.o.r. Iscor Works, Pretoria, (Siding 1143, Cordelfos) plus transport cost

1.2 Outside PWV[1]) area: prices per 1 000 kg f.o.r. Germiston plus transport cost

[1]) Refer Check List page I2 par. C

2.0 **QUANTITY EXTRAS AND DEDUCTIONS PER ITEM**

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch one destination at Works convenience.

PROFIELE - SIEN AANGEHEGTE TEKENINGE/ SECTIONS-SEE ATTACHED DRAWINGS	BASISPRYS/ BASIS PRICE (R.c.)	ITEMSMASSA ITEM MASS (TON/TONS)	EKSTRA/ EXTRA (R.c.)	AFTREKKING/ DEDUCTION (R.c.)
RT6	506-00	5 - 10	40-40	
RT13	477-00	10 - 20	20-05	
RF4B	470-00	20 - 50	9-60	
RF5	554-50	50 - 100	0-00	0-00
REZ7	477-00	100 - 250		3-20
RF7	460-00	250 - 500		6-85
RFX7	460-00	500		10-50
RF8	610-00			
GRF5	610-00			
GRF7	610-00			
GRF8	610-00			

NOTA:
'n Item word gedefinieer as:
Dieselfde profiel, dieselfde lengte, van dieselfde kwaliteit na een bestemming.

NOTE:
An Item is defined as:
The same profile in the same length and and quality to one destination.

3.0 **EKSTRA VIR BEPERKING VAN STANDAARD VERSENDING-TOLERANS** (Verwys bladsy S1 par. 3.0)

(i) 50% van standaard R6-70

(ii) Wanneer 'n 2½% versendingtolerans gespesifiseer word R13-40
(Slegs van toepassing op items onder 100 ton)

3.0 **EXTRA FOR RESTRICTION OF STANDARD DISPATCH TOLERANCE** (Refer page S1 par. 3.0)

(i) 50% limitation on standard R6-70

(ii) When a 2½% dispatch tolerance is specified R13-40
(Applicable only to items under 100 tons)

GEKLASSIFISEER

GEKLASSIFISEER

VENSTERPROFIELE
SPESIFIKASIES

WINDOW SECTIONS
SPECIFICATIONS

1.0 ALGEMEEN

1.1 Vensterprofiele word gewals in 'n kwaliteit geskik vir die eindgebruik.

1.2 Geen toets- en analisesertifikate word voorsien nie.

1.3 Alle lengtes word gerolrig.

2.0 LENGTES

Vensterprofiele word in toevallige lengtes van 5 m tot 7,5 m gelewer. Bykomstig moet klante bereid wees om tot 5% van die massa van elke item in toevallige kortlengtes vanaf 1,5 m en langer te aanvaar.

3.0 STANDAARD VERSENDINGTOLERANS

Ten opsigte van elke item behou Yskor die reg voor om te lewer binne die toleranse hieronder gespesifiseer en die item as afgehandel te beskou.

1.0 GENERAL

1.1 Window sections are rolled from a quality suitable for the end use.

1.2 No test and analysis certficates are supplied.

1.3 All lengths are roller straightened.

2.0 LENGTHS

Window sections are supplied in random lengths from 5 m to 7,5 m. In addidition customers must be prepared to accept up to 5% by mass as part of each item in random short lengths from 1,5 m upwards.

3.0 STANDARD DISPATCH TOLERANCE

In respect of each item Iscor reserves the right to supply within the tolerances specified below and to consider the item complete.

MASSA VAN BESTELDE ITEM/ MASS OF ITEM ORDERED (TON/TONS)	VERSENDING TOLERANS/ DISPATCH TOLERNCE
5 - < 10	± 20%
10 - < 20	± 15%
20 - < 50	± 10%
50 - < 100	± 7½%
⩾ 100	± 5%

Nota : Vir beperkings op standaard versendingtolerans verwys na bladsy P1 par. 3.0.

Note: For restrictions on standard dispatch tolerance see page P1 par. 3.0.

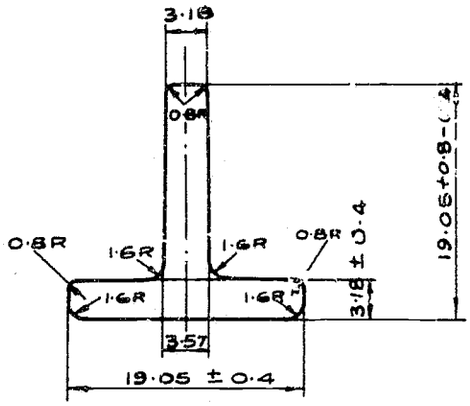
GEKLASSIFISEER

S2
S.P.E. 250
VENSTERPROFIELE
(Nie ware grootte nie.
Alle afmetings in mm)

WINDOW SECTIONS
(Not actual size.
All dimensions in mm)

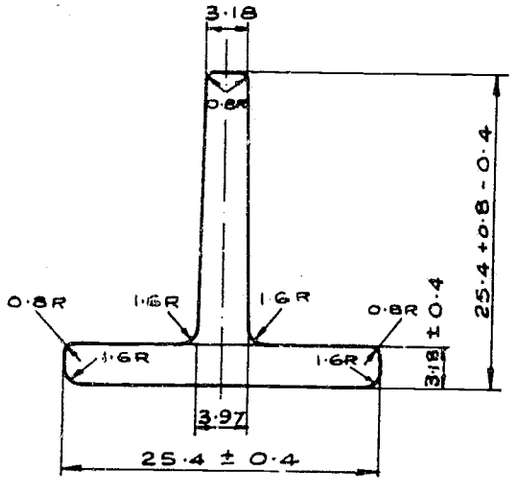
RT6

NOMINALE MASSA/NOMINAL MASS 0,89 kg/m



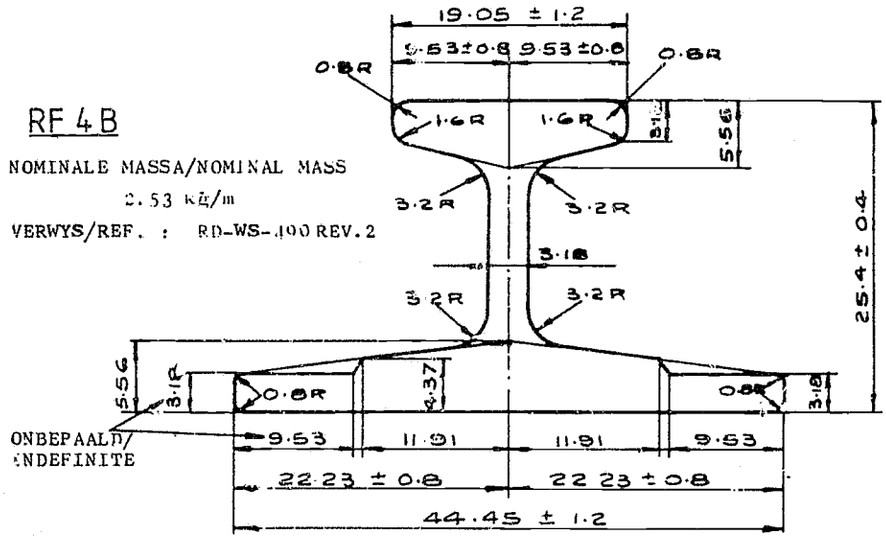
RT13

NOMINALE MASSA/NOMINAL MASS 1,26 kg/m



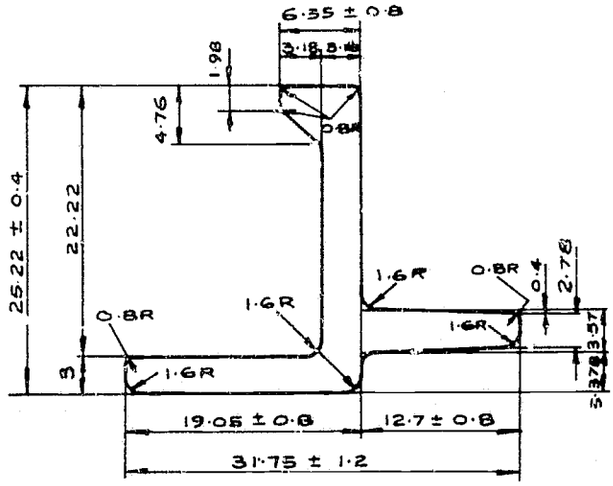
RF4B

NOMINALE MASSA/NOMINAL MASS
2.53 kg/m
VERWYS/REF. : RD-WS-400 REV. 2



RF5

NOMINALE MASSA/NOMINAL MASS
1.41 kg/m



1981-07-03

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1978-09-01

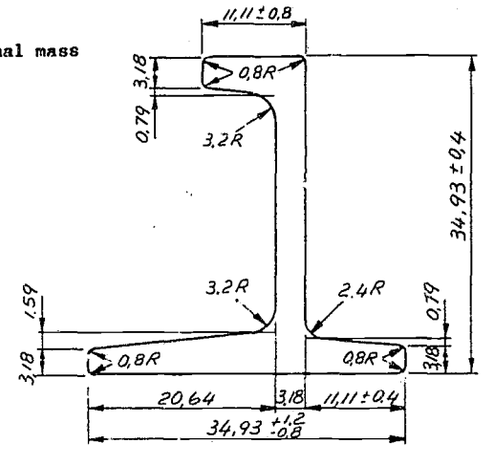
VENSTERPROFIELE
(Nie ware grootte nie.
Alle afmetings in mm)

WINDOW SECTIONS
(Not actual size.
All dimensions in mm)

Nominale massa/Nominal mass

2,08 kg/m

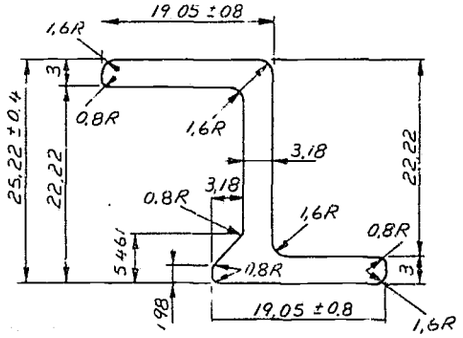
REZ 7



Nominale massa/Nominal mass

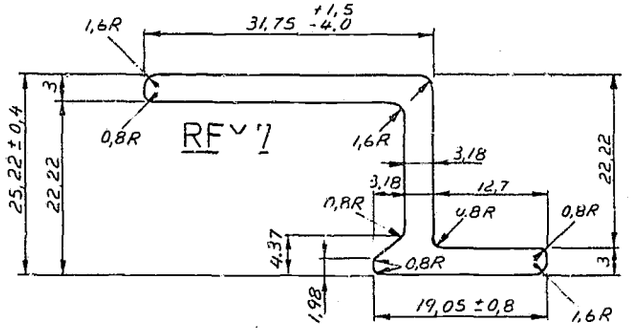
1,73 kg/m

RF 7



Nominale massa/Nominal mass

1,71 kg/m



YSKOR BEPERK ISCOR LIMITED

S4
SPE250
VENSTERPROFIELE
(Nie ware grootte nie.
Alle afmetings in mm)

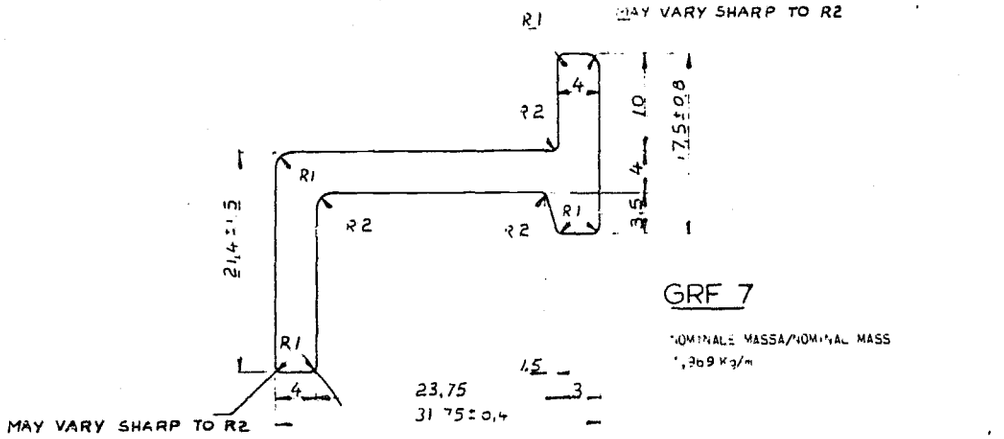
WINDOW SECTIONS
(Not actual size.
All dimensions in mm)

VENSTERPROFIELE

(2 X WARE GROOTTE
AFMETINGS IN MM)

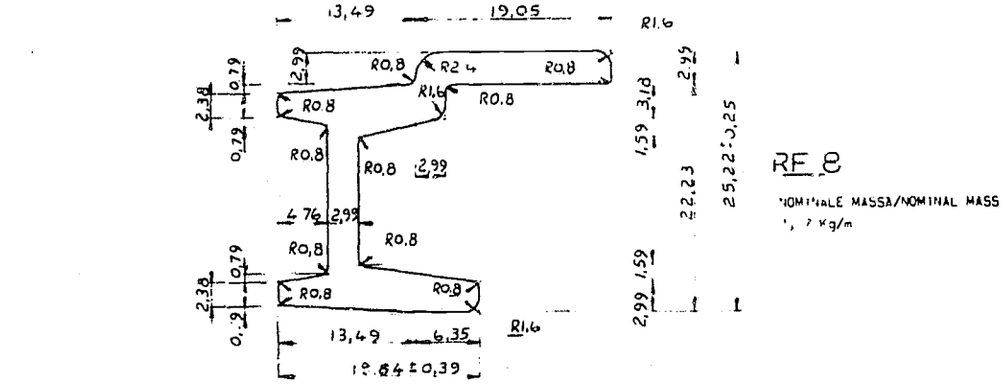
WINDOW SECTIONS

(2 X ACTUAL SIZE
ALL DIMENSIONS IN MM)



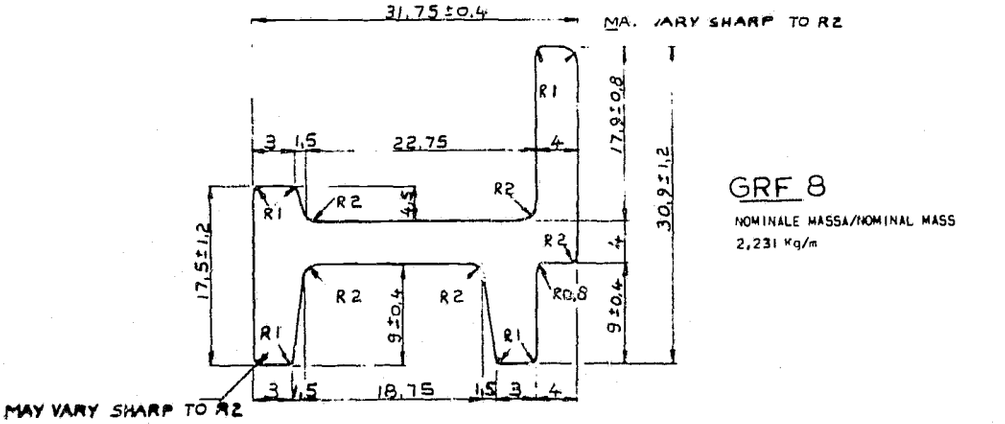
GRF 7

NOMINALE MASSA/NOMINAL MASS
1,309 Kg/m



RF 8

NOMINALE MASSA/NOMINAL MASS
1,7 Kg/m



GRF 8

NOMINALE MASSA/NOMINAL MASS
2,231 Kg/m

DECOMMISSIONED

YSKOR BEPERK ISCOR LIMITED

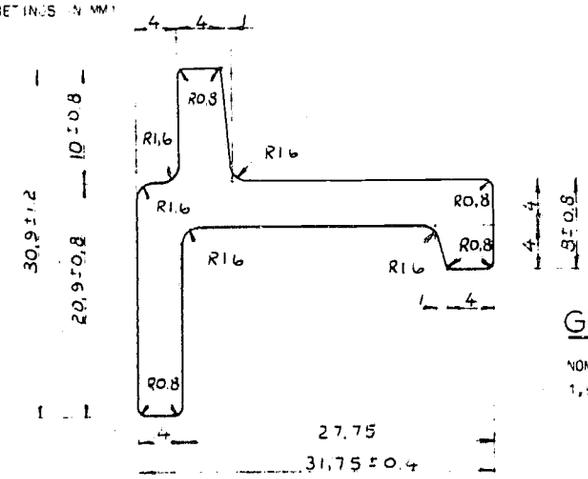
SS
SPE250

VENSTERPROFIELE
(Nie ware grootte nie.
Alle afmetings in mm)

WINDOW SECTIONS
(Not actual size.
All dimensions in mm)

VENSTER PROFIELE

1/2 X WARE GROOTTE
ALLE AFMETINGS IN MM



WINDOW SECTIONS

1/2 X ACTUAL SIZE
ALL DIMENSIONS IN MM

GRF 5

NOMINALE MASSA/NOMINAL MASS
1,936 kg/m

DECLASSIFIED

S.P.E. 261

YSKOR BEPERK ISCOR LIMITED

HEININGPALE, TREKPALE EN SPARRE

FENCING POSTS, STRAINING POSTS AND DROPPERS

DECLASSIFIED

HEININGPALE, TREKPALE, EN SPARRE/FENCING POSTS, STRAINING POSTS AND DROPPERS VIR ~~HEININGS~~DOELEINDES / FOR FENCING PURPOSES

ALGEMEEN/GENERAL

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2 1/2%, mits betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

3. Alle items is onderworpe aan 'n versendingstolerans (Verwys bladsye P2 en S2.

4. Heiningpale, Trekpale en Sparre word verkoop teen 'n prys per metrieke ton (1000 kilogram) gebaseer op die berekende teoretiese massa. (Verwys bladsy S1 par. 2.1)

5. Alle pryse en ekstras hierin kwoteer is per metrieke ton (1000 kg). Enige verwysing na die getal stawe op die faktuur of vragbrief is slegs vir inligting.

6. Pryse en ekstras is die wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.

1. Orders are accepted in accordance with our General Conditions of Sale and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2 1/2%, provided payment is made in accordance with our General Conditions of Sale.

3. All items are subject to an dispatch tolerance (Refer pages P2 and S2).

4. Fencing Posts, Straining Posts and Droppers are sold at a price per metric ton (1000 kilograms) based on the calculated theoretical mass (Refer page S1 par. 2.1)

5. All prices and extras quoted are per metric ton (1000 kg). Any reference to the number of bars on the invoice or consignment note is for information only.

6. Prices and extras are those ruling on date of dispatch, and are subject to change without notice.

OBSOLETE

HEININGPALE, TREKPALE EN SPARRE/FENCING POSTS, STRAINING POSTS AND DROPPERS

A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK
   (a) Beskrywing
   (b) Afmetings
      (i) Lengte (Pale en Sparre)
   (c) Hoeveelheid (Ton)
      - Totale massa van elke item

B. KONTROLELYS VIR PRYSBEPALING

1. Basispryse
   (a) Heiningpale
   (b) Trekpale
   (c) Sparre

2. Hoeveelheidsekstras/-aftrekking

3. Beperkingekstra op standaard versending-toleransa.

4. Nie-standaardlengtes en -gatspasiërings

5. Invoerheffing (R10,25/ton)

C. PWV-GEBIED
Bestaande uit die landdrosdistrikte van Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT
   (a) Description
   (b) Dimensions
      (i) Length (Posts & Droppers)
   (c) Quantity (Tons)
      - Total mass of each item

B. CHECK LIST FOR PRICING

1. Basis Prices
   (a) Fencing Posts
   (b) Straining Posts
   (c) Droppers

2. Quantity extras/deductions

3. Restriction extra on standard dispatch tolerance

4. Non-standard lengths and hole spacings.

5. Import levy (R10,25/ton)

C. PWV AREA
Consisting of the magisterial districts of Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria and Wonderboom.

DECLASSIFIED

HEININGPALE, TREKPALE EN SPARRE VIR OMHEININGSDOELEINDES

FENCING POSTS, STRAINING POSTS AND DROPPERS FOR FENCING PURPOSES

A. PRYSE/PRICES

1. BASISPRYS

1.1 PWV[1] -gebied R307-00
v.o.s. Yskorwerke, Pretoria
(Sylyn 1143, Cordelfos) plus vervoerkoste.

1.2 Buite PWV[1] -gebied R307-00
v.o.s. Germiston plus vervoerkoste.

[1]) Verwys bladsy I2 par. C.

2.0 BASISPRYS PLUS PROFIEL- EN LENGTE-EKSTRA

2.1 Heiningpale

1. BASIS PRICE

1.1 PWV[1] area R307-00
f.o.r. Iscor Works, Pretoria,
(Siding 1143, Cordelfos) plus transport costs.

1.2 Outside PWV 1) area R307-00
f.o.r Germiston plus transport costs.

[1]) Refer page I2 par. C.

2.0 BASIS PRICE PLUS PROFILE AND LENGTH EXTRA

2.1 Fencing Posts

PROFIEL/PROFILE	MASSA/ MASS kg/m	LENGTE (mm)/LENGTH (mm) TRAPPE VAN/INCREMENTS OF 150 mm	PROFIEL-EKSTRA/ SECTION EXTRA (R.c.)	LENGTE-EKSTRA/ LENGTH EXTRA (R.c.)	TOTAAL/ TOTAL (R.c.)
I-profiel/ I-profile (Slegs standaard ponsing) (Standard punching only)	3,00	Standaardlengtes/ Standard Lengths			
		1 400 en/and 1 850	0-00	0-00	307-00
		Nie-standaardlengtes/ Non-standard Lengths			
		1 100 - <1 400	0-00	9-90	316-90
		>1 400 - <1 850	0-00	6-75	313-75
		>1 850 - 2 600	0-00	6-75	313-75
		>2 600 - 3 050	0-00	9-90	316-90
Y-profiel/Y-Section (Met of sonder gate/ With or without holes)	2,50	Standaardlengtes/ Standard Lengths			
		1 400 en/and 1 850	10-75	0-00	317-75
		Nie-standaardlengtes/ Non-standard Lengths			
		1 100 - <1 400	10-75	9-90	327-65
		>1 400 - <1 850	10-75	6-75	324-50
		>1 850 - 2 600	10-75	6-75	324-50
		>2 600 - 3 050	10-75	9-90	327-65

2.2 Trekpale / **2.2 Straining Posts**

PROFIELE/PROFILE	MASSA/ MASS kg/m	LENGTE (mm)/LENGTH (mm)	PROFIEL-EKSTRA/ SECTION EXTRA (R.c.)	LENGTE-EKSTRA/ LENGTH EXTRA (R.c.)	TOTAAL/ TOTAL (R.c.)
Spoorstaaftrekpale/ Rail Section Straining Posts		Standaardlengtes/ Standard Lengths			
	10	2 150	34-30	0-00	341-30
	15	2 150	27-70	0-00	334-70
	22	2 150	25-20	0-00	332-20
		Ander Lengtes/ Other Lengths		Op navraag/ On enquiry	

2.3 Sparre / **2.3 Droppers**

PROFIEL/PROFILE	MASSA/ MASS kg/m	LENGTE (mm)/LENGTH (mm) TRAPPE VAN/INCREMENTS OF 150 mm	PROFIEL-EKSTRA/ SECTION EXTRA (R.c.)	LENGTE-EKSTRA/ LENGTH EXTRA (R.c.)	TOTAAL/ TOTAL (R.c.)
Rifrugsparre/ Ridgeback Droppers		Standaardlengtes/ Standard Lengths			
	0,56	950 - 1 850	33-65	0-00	340-65
		Ander Lengtes/ Other Lengths		Op navraag/ On enquiry	

HEININGPALE, TREKPALE EN SPARRE VIR OMHEININGSDOELEINDES

FENCING POSTS, STRAINING POSTS AND DROPPERS FOR FENCING PURPOSES

3.0 HOEVEELHEIDSEKSTRA/AFTREKKINGS

Die volgende ekstras en aftrekkings is van toepassing op die totale massa van 'n enkele bestelling per kwartaal deur die Korporasie aanvaar of toegewys vir versending soos dit die Werke pas na verskillende versendingsadresse in vol trok * of vragmotorvragte.

* 'n Vol trokvrag bestaan uit:- 32 Ton min. - 39 ton maks. Heiningpale, trekpale en sparre gesamentlik of afsonderlik.

Versendings in kort-trokke kan onderneem word, afhangende van die beskikbaarheid daarvan maar geen waarborg van versendingsdatum kan gegee word nie.

3.0 QUANTITY EXTRA/DEDUCTIONS

The following extras and deductions are applicable on the total mass of a single order per quarter accepted or allocated by the Corporation for dispatch at Works' convenience to different consigning addresses in full truck * or lorry loads.

* A full truck load consists of:- 32 tons min. - 39 tons max. Fencing posts, straining posts and droppers together or separate.

Consignments in short trucks can be done depending on the availability thereof but no consignment date can be guaranteed.

BESTELMASSA/ ORDER MASS TON(S)	EKSTRA/ EXTRA R. c.	AFTREKKING/ DEDUCTION R. c.
40 - < 100	21-00	
100 - < 200	10-50	
200 - < 300	0-00	
300 - < 500		0-00
500 - < 750		3-15
⩾750 -		5-25
		9-45

NOTA:

1) Minimum per bestelling vir versending na een versendingsadres:-

Heiningpale, sparre en trekpale - 40 ton

(ii) Minimum per item vir versending na een versendingsadres:- Heiningpale, hangers en trekpale - 20 ton

NOTE:

1) Minimum per order for dispatch to one consigning address:-

Fencing Posts, droppers and straining posts - 40 tons

(ii) Minimum per item for dispatch to one consigning address:- Fencing posts, droppers and straining posts - 20 tons

4.0 EKSTRA VIR BEPERKING VAN STANDAARD VERSENDING-TOLERANS

(Verwys bladsy S2 paragraaf 4.2)

(i) 50% van standaard R6-70

(ii) Wanneer 'n 2½% versendingtolerans gespesifiseer word ..... R13-40 (Slegs van toepassing op items onder 100 ton)

4.0 EXTRA FOR RESTRICTION OF STANDARD DISPATCH TOLERANCE

(Refer page S2 paragraph 4.2)

(i) 50% limitation on standard R6-70

(ii) When a 2½% dispatch tolerance is specified ..... R13-40 (Applicable only to items under 100 tons)

5.0 NIE-STANDAARDLENGTES EN GATSPASIËRINGS .....Op navraag

5.0 NON-STANDARD LENGTHS AND HOLE SPACINGS .....On enquiry

GECANCELLED

HEININGPALE, TREKPALE EN SPARRE SPESIFIKASIES / FENCING POSTS, STRAINING POSTS AND DROPPERS SPECIFICATIONS

DECLASSIFICATION

1.0 ALGEMEEN

1.1 Produkte word gewals in 'n kwaliteit geskik vir die eindgebruik.

1.2 Geen toets-en analisesertifikate word voorsien nie.

1.3 Materiaal word voorsien in "soos gewalste" toestand m.a.w. nie gerolrig nie.

1.4 Alle materiaal word geteer.

2.0 GROOTTES

2.1 Heiningpale, Trekpale en Sparre word in die volgende nominale massa per meter vervaardig:-

(a) Heiningpale
- (i) I-profiel ..... 3,00 kg/m
- (ii) Y-profiel ..... 2,50 kg/m

(b) Trekpale
- (i) Spoorstaafprofiel ..... 10 kg/m
- (ii) Spoorstaafprofiel ..... 15 kg/m
- (iii) Spoorstaafprofiel ..... 22 kg/m

(c) Sparre

Rifrug 0,56kg/m

2.2 Standaardlengtes

(a) I-profiel en Y-profiel heiningpale ..... 1 400 mm en 1 850 mm

(b) Trekpale ..... 2 150 mm

(c) Rifrugsparre ..... 950 mm tot 1 850 mm in veelvoude van 150 mm

2.3 Tekeninge word op bladsy S3 verstrek.

3.0 GATE EN RIWWE

3.1 I-profiel heiningpale en trekpale*

Standaardponsing van I-profiel-heiningpale en trekpale geskied in ronde gate met 'n diameter van 9,5 mm. Spasiëring is in mm van die bopunt van die paal tot die middelpunt van die eerste gat en tussen die middelpunte van die onderskeie daaropvolgende gate soos volg:-

38mm - 305mm - 254mm - 191mm - 152mm - 152mm (6 gate/holes)

* 22 kg/m trekpale uitgesluit

3.2 Y-profiel-heiningpale

(a) Met gate:
- Gate ..... 50 mm spasiëring
- Afstand tussen riwwe ..... 25 mm

(b) Sonder gate:
- Afstand tussen riwwe ..... 25 mm

3.3 Rifrugsparre

Afstand tussen riwwe ± 10,0 mm.

1.0 GENERAL

1.1 Products are rolled from a quality suitably for the end use.

1.2 No test and analysis certificates are supplied.

1.3 Material supplied in "as rolled" condition i.e. not roller straightened.

1.4 All material is tarred.

2.0 SIZES

2.1 Fencing Posts, Straining Posts and Droppers are produced in the following nominal mass per metre:-

(a) Fencing Posts
- (i) I-profile ..... 3,00 kg/m
- (ii) Y-profile ..... 2,50 kg/m

(b) Straining Posts
- (i) Rail profile ..... 10 kg/m
- (ii) Rail profile ..... 15 kg/m
- (iii) Rail profile ..... 22 kg/m

(c) Droppers

Ridgeback ..... 0,56 kg/m

2.2 Standard Lengths

(a) I-profile and Y-profile Posts ..... 1 400 mm and 1 850 mm

(b) Straining Posts ..... 2 150 mm

(c) Ridgeback Droppers ..... 950 mm to 1 850 mm in steps of 150 mm

2.3 Drawings are given on page S3.

3.0 HOLES AND RIDGES

3.1 I-profile fencing posts and straining posts*

Standard punching in I-profile fencing posts and straining posts, is done in round holes of 9,5 mm diameter. Spacing is in mm from the top of the post to the centre of the first hole, and between the centres of succeeding holes respectively as follows:-

38mm - 305mm - 254mm - 191mm - 152mm - 152mm (6 gate/holes)

* 22 kg/m straining posts excluded

3.2 Y-profile fencing posts

(a) With holes:
- Holes ..... 50 mm spacing
- Distance between ridges ..... 25 mm

(b) Without holes:
- Distance between ridges ..... 25 mm

3.3 Ridgeback Droppers

Distance between ridges ± 10,0 mm.

DECLASSIFICATION

HEININGPALE, TREKPALE EN SPARRE SPESIFIKASIES

FENCING POSTS, STRAINING POSTS AND DROPPERS SPECIFICATIONS

4.0 TOLERANSE

4.1 Lot-toleransie

Hieronder word verstaan die afwyking tussen die werklike massa voorsien (per trok/vragmotorvrag) en die nominale massa soos bereken vanaf lengte voorsien.

PROFIEL/PROFILE	TOELAATBARE AFWYKING PERMISSIBLE VARIANCE
Heiningpale/Fencing posts Trekpale/Straining posts Sparre/Droppers	±4%

4.2 Standaard versending-toleransie

Ten opsigte van elke item behou Yskor die reg voor om te lewer binne die toleranse hieronder gespesifiseer en die item as afgehandel te beskou.

MASSA VAN BESTELDE ITEM MASS OF ITEM ORDERED (TON/TONS)	VERSENDING-TOLERANS DISPATCH TOLERANCE
5 - < 10	±25%
10 - < 20	±20%
20 - < 80	±15%
≥ 80	±7½%

NOTA:
Vir beperkings op standaard versendingstoleransie verwys na bladsy P2 par. 4.0.

5.0 BONDELS

(i) I-profiel 10/bondel
(ii) Y-profiel 10/bondel
(iii) Trekpale .....Los
(iv) Sparre 50/bondel

4.0 TOLERANCES

4.1 Batch tolerances

This is defined as the variance between the actual mass supplied (per truck/lorry load) and the mass as calculated from the nominal mass and metres supplied.

4.2 Standard dispatch tolerance

In respect of each item Iscor reserves the right to supply within the tolerances specified below and to consider the item complete.

NOTE:
For restrictions on standard dispatch tolerance see page P2 par. 4.0.

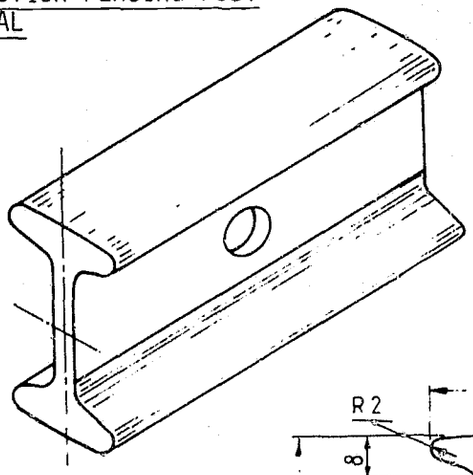
5.0 BUNDLES

(i) I-profile 10/bundle
(ii) Y-profile 10/bundle
(iii) Straining Posts ...Loose
(iv) Droppers 50/bundle

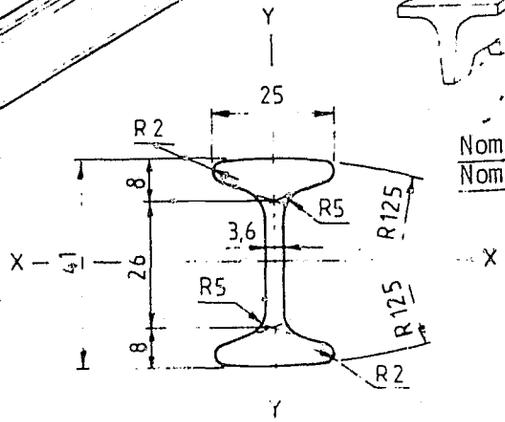
UNCONTROLLED

DECLASSIFIED

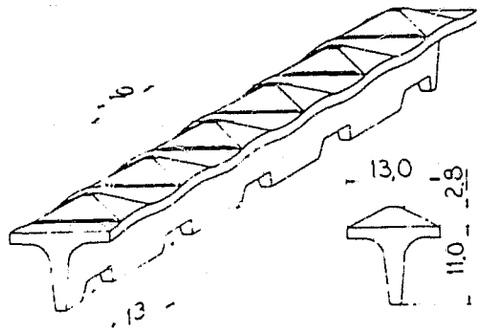
I BEAM SECTION FENCING POST
I DRAADPAAL



NOMINALE MASSA/
NOMINAL MASS 3,00 kg/m



RIFRUGHANGER
RIDGEBACK DROPPER

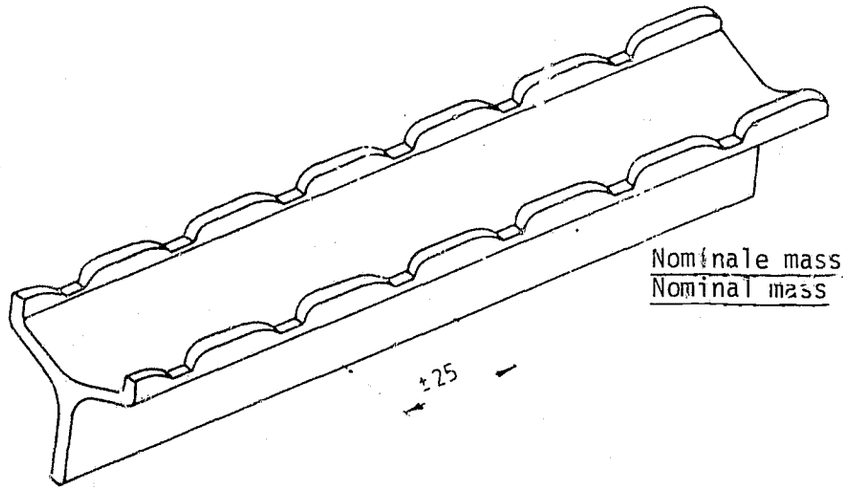


Nominale massa/
Nominal mass = 0,56 kg/m

DEURSNEEOPPERVLAKTE/CROSS SECTIONAL AREA		383.5 mm^2
TRAAGHEIDSMOMENTE / MOMENTS OF INERTIA	I xx	91728 mm^4
	I yy	11292 mm^4
	I POL	103020 mm^4
SEKSIE MODULUS/ MODULI OF SECTION	Z xx	4475 mm^3
	Z yy	903 mm^3

Nota: Alle afmetings is benaderd
Note: All dimensions are approximate

Y-PAAL
Y-SECTION FENCING POST



Nominale massa/
Nominal mass = 2,50 kg/m

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1981-07-03

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1979-07-01

HEININGPALE, TREKPALE EN SPARRE/FENCING POSTS, STRAINING POSTS AND DROPPERS

6.0 AANTAL EENHEDE PER 1000 kg / 6.0 NUMBER OF UNITS PER 1000 kg

LENGTE/LENGTH	EENHEDE PER 1000 kg/UNITS PER 1000 kg	
	Y-profiel/Y-profile (2,50 kg/m)	I-profiel/I-profile (3,0 kg/m)
1 100 mm	363	303
1 250 mm	320	266
1 400 mm	285	238
1 550 mm	258	215
1 700 mm	235	196
1 850 mm	216	180
2 000 mm	200	166
2 150 mm	186	155
2 300 mm	173	144
2 450 mm	163	136
2 600 mm	153	128
2 750 mm	145	121
2 900 mm	137	114
3 050 mm	131	109

LENGTE/LENGTH	EENHEDE PER 1000 kg/UNITS PER 1000 kg
	Rifrugsparre / Ridgeback droppers (0,56 kg/m)
950 mm	1 879
1 000 mm	1 623
1 250 mm	1 428
1 400 mm	1 275
1 550 mm	1 152
1 700 mm	1 050
1 850 mm	965

SPOORSTAAFPROFIEL RAIL PROFILE	LENGTE/LENGTH	EENHEDE PER 1000 kg/UNITS PER 1000 kg TREKPALE/STRAINING POSTS
10 kg/m	2 150 mm	46
15 kg/m	2 150 mm	31
22 kg/m	2 150 mm	21

1981-07-03 Kanselleer en vervang uitgawe gedateer 1979-06-29
Cancels and supersedes issued dated

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S.P.E. 270

YSKOR BEPERK ISCOR LIMITED

WALSDRAAD

WIRE ROD

DECLASSIFIED

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INHOUDSOPGAWE/INDEX

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Ekstra vir toetsertifikate	P2	Extra for test certificates	P2
Beperkingsekstra	P2	Restriction extra	P2
Oppervlak gehalte-ekstra	P2	Surface quality	P2
SPESIFIKASIES	S1-S3	**SPECIFICATIONS**	S1-S3

DECLASSIFIED

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WALSDRAAD/WIRE ROD
ALGEMEEN/GENERAL

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.

2. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2 1/2%, met dien verstande dat betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.

3. Alle items is onderworpe aan 'n versendingstolerans (verwys bladsy P2 en S1).

4. Alle pryse en ekstras hierin kwoteer is per metrieke ton (1000 kg). Enige verwysing na die getal haspels op die faktuur of vragbrief is slegs vir inligting.

5. Normale inspeksie en toetsing word uitgevoer en is ingesluit by die spesifikasie ekstra.

6. Pryse en ekstras is dié wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.

7. Yskor behou die reg voor om produkte te voorsien vanaf die Werke van sy keuse.

1. Orders are accepted in accordance with our General Conditions of Sale, and the provisions of this S.P.E.

2. All prices are subject to a settlement discount of 2 1/2%, provided payment is made in accordance with our General Conditions of Sale.

3. All items are subject to a dispatch tolerance (Refer pages P2 and S1)

4. All prices and extras quoted are per metric ton (1000 kg). Any reference to the number of coils on the invoice or consignment note is for information only.

5. Normal inspection and testing is carried out and is included in the specification extra.

6. Prices and extras are those ruling on date of dispatch and are subject to change without notice.

7. Iscor reserves the right to supply material from the Works of its choice.

1981-07-03

Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated

1980-06-20

DECLASSIFIED

A. KONTROLELYS VIR PLASING VAN BESTELLINGS EN NAVRAE

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      Let Wel: Toets- en analise-sertifikate word na hierdie adres gestuur tensy uitdruklik anders versoek.
      (ii) Aflewerингsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK
   (a) Beskrywing
   (b) Nominale afmetings
      (i) Diameter
      (ii) Haspelmassa
   (c) Hoeveelheid (Ton)
      - Totale massa van elke item
   (d) Kwaliteit
   (e) Sertifisering - tipe sertifikate
   (f) Eindgebruike - spesifiseer
   (g) Haspelhanteringfasiliteite beskikbaar

B. KONTROLELYS VIR PRYSBEPALING
1. Itemprys
2. Kwaliteitekstras
3. Ekstras vir toetsertifikate
4. Beperkingekstras op standaard versendingtolerans
5. Oppervlakgehalte ekstras
6. Invoerheffing (R10-25/ton)

C. PWV-GEBIED
Bestaande uit die landdrosdistrikte van: Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonaria en Wonderboom.

A. CHECK LIST FOR ORDERING AND ENQUIRIES

1. GENERAL
   (a) Destination
      (i) Postal address
      Note: Test and analysis certificates will be forwarded to this address unless specifically stated otherwise.
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT
   (a) Description
   (b) Nominal dimensions
      (i) Diameter
      (ii) Coil mass
   (c) Quantity (Tons)
      - Total mass of each item
   (d) Quality
   (e) Certification - type of certificates
   (f) End uses - specify
   (g) Coil mass handling facilities available

B. CHECK LIST FOR PRICING
1. Item price
2. Quality extras
3. Extras for test certificates
4. Restriction extras on standard dispatch tolerance
5. Surface quality extras
6. Import Levy (R10-25/ton)

C. PWV AREA
Consisting of the magisterial districts of: Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonarea and Wonderboom.

DECLASSIFIED

WALSDRAAD — WIRE ROD

PRYSE/PRICES

1.0 ITEMPRYS

1.1 Die onderstaande pryse is van toepassing op die bestelde massa van elke item op enkele bevestigingsbestelling deur die Korporasie uitgereik ten opsigte van tonnemaat toegewys vir versendings na een bestemming soos dit die Werke pas.

1.2 Vir aflewerings:
(i) Binne P.W.V.*-gebied
Pryse is v.o.s. Yskorwerke, Pretoria (Sylyn 1143 Cordelfos) plus vervoerkoste.
(ii) Buite P.W.V.*-gebied
Pryse is v.o.s. Germiston plus vervoerkoste.
* Verwys kontrolelys bladsy I2 par. C.

1.0 ITEM PRICE

1.1 The following prices are applicable to the ordered mass of each item on any one acceptance order in respect of allocated tonnage for dispatch, to one destination at Works convenience.

1.2 Deliveries:
(i) To P.W.V* area
Prices are f.o.r Iscor Works Pretoria, (Siding 1143 Cordelfos) plus transport cost.
(ii) Outside P.W.V.* area
Prices are f.o.r. Germiston plus transport cost.

* Refer check list page I2 par. C.

DIAMETER (mm)	BASISPRYS/ BASIS PRICE R.c.	PROFIEL EKSTRA/ SECTION EXTRA R.c.	ITEMPRYS/ITEM PRICE 20 -<40 ton(s) R.c.	40 -<80 ton(s) R.c.	80 -<150 ton(s) R.c.	150 -<500 ton(s) R.c.	500 -<1000 ton(s) R.c.	1000 -<2000 ton(s) R.c.	2000 -<3000 ton(s) R.c.	≥3000 ton(s) R.c.
5,5	392-50	8-55	421-15	409-10	401-05	397-05	395-00	391-65	387-65	382-55
6,0	392-50	7-95	420-55	408-50	400-45	396-45	394-40	391-05	387-05	381-95
6,5	392-50	7-30	419-90	407-85	399-80	395-80	393-75	390-40	386-40	381-30
7,0	392-50	5-30	417-90	405-85	397-80	393-80	391-75	388-40	384-40	379-30
7,5	392-50	6-00	418-60	406-55	398-50	394-50	392-45	389-10	385-10	380-00
8,0	392-50	0-00	412-60	400-55	392-50	388-50	386-45	383-10	379-10	374-00
8,5	392-50	4-70	417-30	405-25	397-20	393-20	391-15	387-80	383-80	378-70
9,0	392-50	3-95	416-55	404-50	396-45	392-45	390-40	387-05	383-05	377-95
9,5	392-50	5-00	417-60	405-55	397-50	393-50	391-45	388-10	384-10	379-00
10,0	392-50	3-70	416-30	404-25	396-20	392-20	390-15	386-80	382-80	377-70
10,5	392-50	3-95	416-55	404-50	396-45	392-45	390-40	387-05	383-05	377-95
11,0	392-50	5-50	418-10	406-05	398-00	394-00	391-95	388-60	384-60	379-50
11,5	392-50	6-30	418-90	406-85	398-80	394-80	392-75	389-40	385-40	380-30
12,0	392-50	6-00	418-60	406-55	398-50	394-50	392-45	389-10	385-10	380-00
12,5	392-50	6-65	419-25	407-20	399-15	395-15	393-10	389-75	385-75	380-65
13,0	392-50	6-30	418-90	406-85	398-80	394-80	392-75	389-40	385-40	380-30

NOTA
(i) Itemprys sluit in: (a) basisprys
(b) profielekstra
(c) hoeveelheidekstra/-aftrekking
(ii) Die volgende prysekstras moet bygevoeg word waar van toepassing: (a) kwaliteit
(b) toetssertifikate
(c) beperking op standaard versendingtolerans
(iii) Itemmassa < 20 ton.....Op navraag.

NOTE
(i) Item price includes (a) basis price
(b) profile extra
(c) quantity extra/ deduction
(ii) The following price extras must be included where applicable: (a) quality
(b) test certificates
(c) restriction on standard dispatch tolerance
(iii) Item mass < 20 tons..... On enquiry

2.0 KWALITEITEKSTRAS — 2.0 QUALITY EXTRAS

KWALITEIT	QUALITY	EKSTRA/EXTRA (R.c.)
A. LAEKOOLSTOF GRADE	A. LOW CARBON GRADES	
1. Heiningdraad	1. Fence Wire	0-00
2. Spykerdraad	2. Nail Wire	0-00
3. Ogiesdraad	3. Netting Wire	12-25
4. Ogiesdraad (Werke van lewering gespesifiseer)	4. Netting wire (Delivery from specified Works)	51-75
5. Laekoolstofsproeistaal	5. Low Carbon Rimming Steel	51-75
B. MEDIUMKOOLSTOF GRADE	B. MEDIUM CARBON GRADES	
1. BS 970: Part 1 1955: EN5A	1. BS 970: Part 1: EN5A	51-25
2. BS 970: Part 1 1955: EN5A (gewysig)	2. BS 970: Part 1: EN5A (mod.)	68-50
C. KABELTOU GRADE	C. ROPE WIRE GRADES	
1. Sagte reeks (0,04/0,29%C)	1. Mild Range (0,04/0,29%C)	56-00
2. Gewone reeks (0,30/0,39%C)	2. Ordinary Range (0,30/0,39%C)	68-25
3. Gewone reeks (0,40/0,59%C)	3. Ordinary Range (0,40/0,59%C)	81-00
4. Gewone reeks (0,60/0,87%C)	4. Ordinary Range (0,60/0,87%C)	91-50
Nota: Walsdraad vir kabeltou moet in koolstofreekse van 0,10%C minimum bestel word.	Note: Rope wire rod must be ordered in carbon ranges of minimum 0,10%C.	
5. Nouer koolstofreekse	5. More restrictive carbon ranges	Op navraag/ On enquiry

YSKOR BEPERK ISCOR LIMITED

WALSDRAAD WIRE ROD

3.0 EKSTRA VIR TOETSSERTIFIKATE

Toetssertifikate.....Op navraag

4.0 EKSTRA VIR BEPERKING OP STANDAARD VERSENDING-TOLERANS (Verwys bls. S1 par. 2.2)

(i) 50% van standaard..... R6-70
(ii) Wanneer 'n 2½% versendingtolerans gespesifiseer word R13-40
(Slegs van toepassing op items van onder 150 ton).

5.0 OPPERVLAKGEHALTE-EKSTRA
Strenger as standaard oppervlak-gehalte.....Op navraag
(Sien bladsy S1. par. 1.6)

3.0 EXTRA FOR TEST CERTIFICATE

Test certificate.....On enquiry

4.0 EXTRA FOR RESTRICTION ON STANDARD DISPATCH TOLERANCE (Refer page S1 par. 2.2)

(i) 50% limitation on standard..... R6-70
(ii) When a 2½% dispatch tolerance is specified..... R13-40
(Applicable only to items under 150 tons)

5.0 SURFACE QUALITY EXTRA
Higher grade surface quality than standard.....On enquiry
(see page S1 par. 1.6)

1982-01-01 Kanselleer en vervang uitgawe gedateer
Cancels and supersedes issue dated 1981-07-03

OBSOLETE

WALSDRAAD — WIRE ROD

SPESIFIKASIES

1.0 ALGEMEEN

1.1 Die Staal word vervaardig deur die Basiese Opehard/Basiese Suurstof- of Basiese Elektriese proses soos dit die Werke pas.

1.2 Walsdraad word geproduseer in haspels van een ongebroke lengte wat deeglik gebind is. Vir bondelpraktyk toegepas sien bladsy S3 par. 5.0

1.3 Walsdraad word geproduseer vir die doel van draadvervaardiging.

1.4 'n Metaaletiket wat die grootte, gietnommer en koolstofinhoud aantoon, word aan elke haspel geheg.

1.5 Walsdraad is vry van skadelike segregasies (slegs vir koolstofinhoud $< 0,80\%$).

1.6 Walsdefekte soos voue, krake, nate, ens. oorskry nie 'n defekdiepte van meer as 4% van die nominale diameter nie.

1.7 Stelmor afkoeling word soos volg toegepas:
i) Pretoriawerke: 5,5 mm tot 10,5 mm
ii) Newcastlewerke: 5,5 mm tot 13,0 mm

1.8 Meganiese-ontskaling word nie aanbeveel nie maar walsdraad is geskik vir suurontskaling.

1.9 Medium-tot-hoëkoolstofwalsdraad word voorsien met 'n maksimum gemiddelde ontkolingsdiepte van 3% van die nominale diameter.

1.10 Die voorente van haspels word normaalweg nie afgesny nie en defekte en dimensionele afwykings mag in hierdie gedeeltes voorkom.

1.11 Gietpotanalisesertifikate word vir alle kwaliteite voorsien indien dit so op die bestelling gespesifiseer word.

2.0 TOLERANSE

2.1 Dimensionele-toleranse

i) Diameter: ±0,30 mm
ii) Maks. ovaliteit: 0,50 mm

2.2 Standard Versendingtoleranse
Ten opsigte van elke item behou Yskor die reg voor om te lewer binne die toleranse hieronder gespesifiseer en die item as afgehandel te beskou.

SPECIFICATIONS

1.0 GENERAL

1.1 The Steel is made by the Basic Open Hearth, Basic, Oxygen or Basic Electric process, at Works convenience.

1.2 Wire rod is produced in coils of one continuous length, which are securely bound. See page S3 par. 5.0 for bundling practice

1.3 Wire rod is intended for use in wire manufacturing.

1.4 A metal label showing size, cast number and carbon content is attached to each coil.

1.5 Wire rod is free from harmful segregations ($< 0,80\%$ carbon content only.)

1.6 Rolling defects such as laps, cracks, seams, etc., do not exceed a depth of 4% of the nominal diameter.

1.7 Stelmor coolling is applied as follows:
i) Pretoria Works: 5,5 mm to 10,5 mm
ii) Newcastle Works: 5,5 mm to 13,0 mm

1.8 Mechanical descaling is not recommended but wire rod is suitable for acid descaling.

1.9 Medium to high carbon wire rod is supplied against a maximum average decarburisation depth of 3% of the nominal diameter.

1.10 Leading ends of coils are not sheared. Defects and dimensional variations may occur in these portions.

1.11 Ladle analysis certificates will be supplied for all qualities if specified on the order.

2.0 TOLERANCES

2.1 Dimensional Tolerances

i) Diameter: ±0,30 mm
ii) Max. ovality: 0,50 mm

2.2 Standard Dispatch Tolerances
In respect of each item Iscor reserves the right to supply within the tolerances specified below and to consider the item complete.

MASSA VAN ITEM/MASS OF ITEM (TON/TONS)	VERSENDINGTOLERANS DISPATH TOLERANCE
20 - < 75	±13,0%
75 - < 150	± 7,5%
≥ 150	± 5,0%

NOTA:
Vir beperkings op standaard versendingtoleranse verwys na bladsy P2 par. 4.0

NOTE:
For restrictions on standard dispatch tolerance see page P2 par. 4.0

YSKOR BEPERK ISCOR LIMITED

WALSDRAAD

WIRE ROD

3.0 CHEMIESE ANALISE

Chemiese samestellings waarna verwys word is altyd gietpotanalise en produkanalise is onderhewig aan afwykings volgens aanvaarde internasionale standaarde.

3.0 CHEMICAL ANALYSIS

Chemical compositions referred to are always ladle analyses and product analysis is subject to deviations in accordance with acceptable international standards.

3.1 NEWCASTLEWERKE

3.1 NEWCASTLE WORKS

GRAAD/GRADE	CHEMIESE SAMESTELLINGS % / CHEMICAL COMPOSITION %				
	C	Mn	P maks/max	S maks/max	Si maks/max
Laekoolstof ogiesdraad Low carbon netting wire	0,08 maks./max.	0,40/0,60	0,050	0,050	0,35
Ogiesdraad Netting wire	0,10 maks./max.	0,40/0,60	0,050	0,050	0,35
Heiningdraad Fence wire	0,10 makx./max.	0,50/0,70	0,050	0,050	0,35
Mediumkoolstofwalsdraad: Medium Carbon wire rod: (i) BS 970: 1955 : En 5A (ii) BS 970: 1955 : En 5A (gewysig / modified) (iii) Campeon Walsdraad/Wire Rod (Slegs mikpunt analise/ aim analysis only)	 0,25/0,30 0,25/0,35 0,35/0,40	 0,70/0,90 0,70/0,90 0,80/1,00	 0,060 0,060 0,050	 0,060 0,060 0,050	 0,35 0,35 0,35
Kabeltou walsdraad/Rope wire rod					
0,30/0,39	0,30/0,39	0,60/0,80	0,040	0,040	0,35
0,35/0,44	0,35/0,44	0,60/0,80	0,040	0,040	0,35
0,40/0,49	0,40/0,49	0,60/0,80	0,040	0,040	0,35
0,45/0,54	0,45/0,54	0,60/0,80	0,040	0,040	0,35
0,50/0,59	0,50/0,59	0,60/0,80	0,040	0,040	0,35
0,55/0,64	0,55/0,64	0,60/0,80	0,040	0,040	0,35
0,60/0,69	0,60/0,69	0,60/0,80	0,040	0,040	0,35
0,63/0,72	0,63/0,72	0,60/0,80	0,040	0,040	0,35
0,65/0,74	0,65/0,74	0,60/0,80	0,040	0,040	0,35
0,68/0,77	0,68/0,77	0,60/0,80	0,040	0,040	0,35
0,70/0,79	0,70/0,79	0,60/0,80	0,040	0,040	0,35

NOTA: Bostaande kwaliteite word vervaardig met 'n B.S.O.- en Stringgietpraktyk.

NOTE: The above qualities are produced on the B.O.F. process and continuous casting practice.

3.2 PRETORIAWERKE

3.2 PRETORIA WORKS

GRAAD/GRADE	CHEMIESE SAMESTELLINGS % CHEMICAL RANGE %				
	C	Mn	P Maks./Max	S Maks./Max	Si Maks./Max
Heiningdraad Fence Wire	0,16 maks./ max.	0,70 maks./ max.	0,060	0,060	0,35
Spykerdraad Nail Wire	0,18 maks./ max.	0,70 maks./ max.	0,060	0,060	0,35
Ogiesdraad Netting Wire	0,05/0,11	0,35/0,60	0,050	0,050	0,35
Laekoolstofsproeistaal Low Carbon Rimming Steel	0,05/0,11	0,45 maks./ max.	0,050	0,050	-
Kabeltou Walsdraad/Rope Wire Rod					
(a) Sagte/mild	0,04/0,29	0,40/0,60	0,040	0,040	0,30
(b) Gewone/Ordinary	0,30/0,39	0,40/0,60	0,040	0,040	0,35
(c) Gewone/Ordinary	0,40/0,59	0,60/0,90	0,040	0,040	0,35
(d) Gewone/Ordinary	0,60/0,87	0,60/0,90	0,040	0,040	0,35

DECROZEILED

WALSDRAAD
5.0 MASSAS EN AFMETINGS VAN HASPELS

WIRE ROD
5.0 MASS AND DIMENSIONS OF COILS

	NEWCASTLE	PRETORIA	
	5,5 - 13,0 mm	10,5 mm	>10,5 - 13,0 mm
Gemiddelde Massa Average Mass (kg)	1 680	680	253
Maks. Binnediameter Max. Inside Diameter (mm)	800	800	790
Maks. Buitediameter Max. Outside Diameter (mm)	1 250	1 150	1 100
Maks. Hoogte Max. Height (mm)	1 250	2 000[a])	-
Vir 95% van Bestelde massa For 95% of Ordered mass	1 250 - 1 750 kg	580 - 700 kg	205-275 kg
Vir 5% van Bestelde massa For 5% of Ordered mass	300 - 1 250 kg	300 - 580 kg	130 - 205 kg

NOTA:
a) 680 kg Haspels vanaf Pretoria word saam gebondel in pakke van 3.

b) Alle ander haspels is normaalweg enkel.

NOTE:
a) 680 kg Coils from Pretoria are bundled in stacks of 3.
b) All other coils are normally single.

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Cancels and supersedes issue dated

1980-06-20

ONAUTORISEERD

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S.P.E. 275

YSKOR BEPERK ISCOR LIMITED

RONDSTAAL VIR BOUT EN MOER VERVAARDIGING

ROUNDS FOR BOLT AND NUT MANUFACTURING

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RONDSTAAL VIR BOUT EN MOER VERVAARDIGING

ROUNDS FOR BOLT AND NUT MANUFACTURING

7. Massa en Afmetings van Rolle

7. Mass and Dimensions of Coils

	NEWCASTLE			PRETORIA		
	DRAADWALS/ ROD MILL	STAAFWALS BAR MILL		D.W11/R.M11	F.W.11/S.S.M.11	F.W.11/S.S.M.11
		13-21mm	21-26mm		14,5-26 mm	14,5 mm
Gemiddelde Massa per Rol/ (kg) Average Mass of Coil/(kg)	1680 kg	1300 kg	2200 kg	± 680	± 375	± 253
Binne Deursnee van Rol/ ((mm) maks/max) Inside Diameter of Coil	750	1,100	1,100	± 790	± 770	± 770
Buite Deursnee van Rol/ ((mm) maks/max) Outside Diameter of Coil	1250	1400	1400	±1050	±1100	±1100
Hoogte van Baal (3 Rolle) ((mm) maks/max) Height of Stack (3 Coils)	1250	1000	1000	±1920	-	-
Vir 95% van Massa van Bestelling/ For 95% of Mass of Order	1250- 1750 kg	900- 1700 kg	1700- 2200 kg	580- 700 kg	320- 395 kg	205- 275
Vir 5% van Massa van Bestelling/ For 5% of Mass of Order	300- 1250 kg	300- 900 kg	600- 1700 kg	300- 580 kg	190- 320 kg	130- 205 kg

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RONDSTAAL VIR BOUT EN MOER VERVAARDIGING

ROUNDS FOR BOLT AND NUT MANUFACTURING

B. STANDAARDVERVAARDIGINGSPRAKTYK
STANDARD MANUFACTURING PRACTICE

1. SPESIFIKASIES
1.1 Die staal word vervaardig deur die Basiese Opeherd/Basiese Suurstof- of Basiese Elektriese proses soos dit die werke pas
1.2 Rondstaal vir Bout en Moer vervaardiging word normaalweg gelewer volgens 'n gietpotanalisesertifikaat tensy spesifiek anders ooreengekom.
1.3 Klant moet eindgebruik spesifiseer
2. STANDAARD MERKING
Aangeheg aan elke haspel is 'n metaaletiket wat die grootte, gietnommer en kwaliteit aandui (Kleurkode op aansoek)
3. TOLERANSIES
Rondstaal word geproduseer in rolle van 'n aaneenlopende lengte. Rondstaal groottes is korrek binne die toleransies toegelaat volgens hierdie S.P.E.
Die benaderde massa en afmetings van rolle word in paragraaf 7 aangedui.
4. INTERNE STRUKTUUR EN OPPERVLAKAFWERKING
Rondstawe is vry van skadelike pyp, segregasie en oppervlak defekte.
Oppervlakdefekte diepte sal nie meer as 4% van dwarsdeursnit wees nie.
Rondstaal vir Bout- en Moervervaardiging kan ook gelewer word tot ooreengekome oppervlakdefekstandaard wat sal afhang van die eindgebruik. Die standaard van oppervlakdefekte sal op 'n navraagbasis tussen Yskor en die klant ooreengekom word.
5. BEHEERDVERKOEL
Gehaspelde rondstaal word beheerdverkoel tot en met 10,5 mm by Pretoriawerke en tot en met 13,0 mm by Newcastlewerke.
6. OORMAAT OF ONDERMAAT
Ten opsigte van enige item van 'n bestelling behou ons ons die reg voor om te lewer volgens die toleransies hieronder aangedui en om die

1. SPECIFICATIONS
The steel is made by the Basic Open Hearth, Basic Oxygen or Basic Electric process, at Works convenience.
1.2 Rounds for Bolt and nut manufacturing are normally supplied against a ladle analysis certificate unless otherwise specifically agreed to.
1.3 Customer must state the end use.
2. STANDARD MARKING
A metal lable showing size, cast number and quality is attached to each coil.
(Colour code on application)
3. TOLERANCES
Rounds are produced in coils of one continous length. They are correct to size within the tolerances allowed within this this S.P.E.
The approximate mass and dimensions of coils are shown in paragraph 7.
4. INTERNAL SOUNDNESS AND SURFACE FINISH
Rounds are free from harmful pipe, segregation and surface defects.
Surface defect depths shall not exceed 4% of the cross section.
Rounds for Bolt and Nut manufacturing may also be supplied according to agreed surface defect standards which will depend on the end use. The standard of surface defects will be determined on an enquiry basis between Iscor and the customer.
5. CONTROLLED COOLING
C Coiled rounds are controlled cooled up to 10,5 mm at the Pretoria Works and up to 13,0 mm at the Newcastle Works.
6. OVERAGE OR UNDERAGE
In respect of any item of an order we reserve the right to supply to the tolerances specified below and to consider the item complete.

Massa van item / Mass of item Ton/Tons	Oormaat / Ondermaat Overage/Underage %
20 - 75	± 15,0
75 - 150	± 7,5
150	± 5,0

Vir beperking op bogenoemde toleransies verwys bladsy P1 par. 3

For limitations on above tolerances refer page P1 par. 3

5. GROOTTE EKSTRAS
5.1 Rondstaal vir Bout en Moer Vervaardiging

5. SIZE EXTRAS
5.1 Rounds for Bolt and Nut Manufacturing

DIAMETER (mm)	DIAMETER TOLERANSIE/ TOLERANCE (mm)	OVALITEIT/ OVALITY (mm)	EKSTRA/EXTRA R.c.
5,5 *	± 0,25	0,40 maks/max	71-75
6,5 *	± 0,25	0,40 maks/max	65-20
8,0 *	± 0,25	0,40 maks/max	47-45
10,0 *	± 0,25	0,40 maks/max	40-80
10,5 *	± 0,25	0,40 maks/max	42-50
11,5 *	± 0,25	0,40 maks/max	42-50
12,0 *	± 0,25	0,40 maks/max	28-25
12,5 *	± 0,25	0,40 maks/max	29-95
12,7	± 0,25	0,40 maks/max	29-95
13,0 *	± 0,25	0,40 maks/max	29-95
13,5	± 0,35	0,60 maks/max	29-95
13,6	± 0,35	0,60 maks/max	29-95
14,6	± 0,35	0,60 maks/max	23-65
15,0	± 0,35	0,60 maks/max	23-65
16,0	± 0,35	0,60 maks/max	18-30
16,5	± 0,35	0,60 maks/max	20-05
18,5	± 0,35	0,60 maks/max	16-35
19,2	± 0,35	0,60 maks/max	16-35
20,0	± 0,35	0,60 maks/max	14-50
20,5	± 0,35	0,60 maks/max	16-35
23,0	± 0,35	0,60 maks/max	16-35
25,0	± 0,35	0,60 maks/max	14-50
26,0	± 0,35	0,60 maks/max	16-35
32,0 §	± 0,50	0,80 maks/max	18-25
33,5 §	± 0,50	0,80 maks/max	20-00
35,0 §	± 0,50	0,80 maks/max	18-25
37,0 §	± 0,50	0,80 maks/max	20-00
40,0 §	± 0,50	0,80 maks/max	18-25

§ Slegs lengtes
* Mag beheerd afgekoel wees (Slegs Rolle)

§ Lengths only
* May be control cooled (Coils only)

5.2 VERWYDERING VAN OPPERVLAKGEBREKE
Getrokke materiaal
Materiaal bedoel vir trekdoeleindes word gewaarborg om nie die ondergenoemde maksimum persentasie defekdiepte op die finale produkte te oorskry nie:
Oppervlak Graad D3: 4% R 0-00
D2: 2½% R28-90

5.2 REMOVAL OF SURFACE DEFECTS
Drawn material
Material intended for drawing purposes will be guaranteed not to exeed the undermentioned maximum percentage defect depths on the final products:
Surface Grade D3: 4% R 0-00
D2: 2½% R28-90

6. KWALITEITE

6. QUALITIES

BESKRYWING / DESCRIPTION	Ekstra/Extra R c
C1 Grade 1	66-00
C1 Grade 2	34-00
C1 Grade 3 (slegs moerstaal/nut steel only)	34-00
C1 Grade 4	57-25
C1 Grade 6	68-50
C4R	120-75
C8R	204-50
Lae Koolstof Sproeistaal / Low Carbon Rimming	Op Navraag/ On Application

ROHDSTAAL VIR BOUT EN MOER VERVAARDIGING

A. PRYSE

1. BASISPRYS

(a) PWV 1) - gebied ..... R395-50 /1000 kg v.o.s. Yskorwerke, Pretoria, (Sylyn 1143, Cor Delfos.) plus padvervoer/spoorvrag.

(b) Buite PWV 1) - gebied .... R395-50 /1000 kg v.o.s. Germiston plus spoorvrag
(1) Verwys kontrolelys par. C

2. HOEVEELHEIDSEKSTRAS/AFTREKKINGS SIEN TABEL

Die volgende ekstras en aftrekkings is van toepassing op die berekende massa van elke item op 'n enkele bevestigingsbestelling deur die Korporasie uitgereik, t.o.v. tonnemaat toegewys vir versending na een bestemming soos dit die Werke pas.

ITEM (TON) / ITEM (TONS) *	EKSTRA EXTRA R.c.	AFTREKKINGS DEDUCTION R.c.
3 < 5 1)	65-50	
5 < 10 1)	23-40	
10 < 20	0-00	0-00
20 < 40		4-85
⩾ 40		9-70

(1) Slegs beskikbaar op navraag

OPMERKING

(*) Vir die doel van hierdie S.P.E. word een lengte, een kwaliteit van een dwarsdeursnee bestel, geag 'n item te wees.

3. BEPERKING OP OOR- OF ONDERMAAT TOELATING (Verwys bladsy S1, par. 1.4)

(i) 50% van standaard oor- of ondermaattoelating ..... R 6-70

(ii) Wanneer 2 1/2% oor- of ondermaat van item massa gespesifiseer word . R13-40 (Slegs van toepassing op items onder 100 ton)

4. LENGTE-EKSTRAS

GESPESIFISEERDE LENGTES/ SPECIFIED LENGTHS (m)	STANDAARDLENGTE IN TRAPPE VAN 1 m STANDARD LENGTH IN INCREMENTS OF 1 m		NIE-STANDAARDLENGTE IN TRAPPE VAN 1 m (MINIMUM 10 mm) NON-STANDARD LENGTH IN INCREMENTS OF 1 m (10 mm MINIMUM)	
	INSLUITEND KORTLENGTES * / INCLUDING SHORT LENGTHS * R.c.	UITSLUITEND KORTLENGTES/ EXCLUDING SHORT LENGTHS R.c.	INSLUITEND KORTLENGTES * / INCLUDING SHORT LENGTHS * R.c.	UITSLUITEND KORTLENGTES/ EXCLUDING SHORT LENGTHS R.c.
< 6	Op aansoek / 0-00 1	On application 13-80	Op aansoek / 13-80 1	On application 27-60
6 - 13				

1) 5% Kort lengtes aanvaarbaar
* Met dien verstande dat:-
(a) Lengtes in toevallige kort lengtes van 3 m tot lengte bestel ingesluit kan word (Bestellings moet gemerk word - "Toevallige Kortlengtes ingesluit");
OF
(b) 'n sny-toelating van minstens 3 m toegelaat word. (Bestellings moet dienooreenkomstig geëndosseer word);

ROUNDS FOR BOLT AND NUT MANUFACTURING

A. PRICES

1. BASIS PRICE

(a) PWV 1) area ..... R395-50 /1000 kg f.o.r. Iscor Works, Pretoria (Siding 1143, Cor Delfos) plus cartage/railage.

(b) Outside PWV 1) area ..... R395-50 /1000 kg f.o.r. Germiston plus railage
(1) Refer Check List par. C

2. QUANTITY EXTRAS AND DEDUCTIONS- SEE TABLE

The following extras and deductions are applicable to the calculated mass of each item on any one acceptance order i.r.o. allocated tonnage for dispatch to one destination at Works convenience.

(1) Available on application only

NOTE

(*) For the purpose of this S.P.E. one length, one quality ordered of one cross-section is regarded as constituting an item.

3. LIMITATION ON OVERAGE OR UNDERAGE ALLOWANCE (Refer page S1, par. 1.4)

(i) 50% limitation on standard overage or underage ..... R 6-70

(ii) When 2 1/2% overage or underage of item mass is specified .... R13-40 (Applicable only to items under 100 tons)

4. LENGTH EXTRAS

1) 5% Short lengths acceptable
* With the understanding that:-
(a) Lengths in random short lengths from 3 m up to the length ordered may be (Orders should be endorsed - "Random shorts included");
OR
(b) a cutting range of at least 3 m is allowed. (Orders should be endorsed accordingly);

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YSKOR BEPERK ISCOR LIMITED

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A. KONTROLELYS VIR PLASING VAN BESTELLINGS

1. ALGEMEEN
   (a) Bestemming
      (i) Posadres
      (ii) Afleweringsadres
   (b) Aflewering verlang
      (i) Datum
      (ii) Spoorvervoer
      (iii) Padvervoer

2. PRODUK
   (a) Beskrywing (Verwys ook bl. S1)
   (b) Afmetings
      (i) Diameter
      (ii) Rolmassa
      (iii) Lengtes
   (c) Hoeveelheid (Ton)
      - Totale massa van elke item
   (d) Kwaliteit
   (e) Toleransie
   (f) Sertifisering - tipe sertifikate
   (g) Rolmassa-hanteringsfasiliteite beskikbaar
   (h) Eindgebruik

A. CHECK LIST FOR ORDERING

1. GENERAL
   (a) Destination
      (i) Postal address
      (ii) Consignment address
   (b) Delivery required
      (i) Date
      (ii) Rail Transport
      (iii) Road Transport

2. PRODUCT
   (a) Description (Refer also page S1)
   (b) Dimensions
      (i) Diameter
      (ii) Coil mass
      (iii) Lengths
   (c) Quantity (Tons)
      - Total mass of each item
   (d) Quality
   (e) Tolerance
   (f) Certification - type of certificates
   (g) Coil mass-handling facilities available
   (h) End use

B. KONTROLELYS VIR PRYSBEPALING

1. Basisprys
2. Hoeveelheidsekstras/aftrekkings
3. Beperking op oormaat/ondermaat (Verwys Bls. S2 par. 6.1)
4. Lengtes ekstras ekstras
5. Grootte ekstras
6. Kwaliteitsekstras
7. Invoerheffing (R10,25/ton)

B. CHECK LIST FOR PRICING

1. Basis Price
2. Quantity extras/deductions
3. Limitation on overage/underage (Refer page S2 par. 6.1)
4. Length extras
5. Size extras
6. Quality extras
7. Import Levy (R10,25/ton)

C. PWV-GEBIED

Bestaande uit die landdrosdistrikte van: Alberton, Alexandra-Dorpsgebied, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonarea en Wonderboom.

C. PWV AREA

Consisting of the magisterial districts of: Alberton, Alexandra Township, Benoni, Boksburg, Brakpan, Delmas, Edenvale, Germiston, Johannesburg, Kempton Park, Krugersdorp, Nigel, Pretoria, Randburg, Randfontein, Roodepoort-Maraisburg, Sandton, Springs, Vanderbijlpark, Vereeniging, Westonarea and Wonderboom.

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YSKOR BEPERK ISCOR LIMITED

S.P.E. 275

RONDSTAAL VIR BOUT EN MOER VERVAARDIGING

VOORWOORD

1. Bestellings word aangeneem in ooreenstemming met ons Algemene Verkoopsvoorwaardes en die bepalings van hierdie S.P.E.
2. Bestellings word volgens Yskor se keuse op Pretoria- of Newcastle-werke geplaas.
3. Alle pryse is onderworpe aan 'n vereffeningsafslag van 2 1/2%, met dien verstande dat betaling in ooreenstemming met ons Algemene Verkoopsvoorwaardes geskied.
4. Alle items is onderworpe aan 'n oormaat of ondermaat ooreenkomstig bladsye P1 & S1 par. 3 en par. 6
5. Rondstaal word verkoop teen 'n prys per metrieke ton (1 000 kilogram). Enige verwysing na die getal rolle of lengtes op die faktuur of vragbrief is slegs vir inligting.
6. Ekstras en aftrekkings hierin gekwoteer, is per metrieke ton (1 000 kilogram). Elke ekstra is afsonderlik en uitdruklik.
7. Pryse en ekstras is dié wat op die versendingsdatum geld en is onderworpe aan verandering sonder kennisgewing.

ROUNDS FOR BOLT AND NUT MANUFACTURE

PREFACE

1. Orders are accepted in accordance with our General Conditions of Sale, and the provisions of this S.P.E.
2. Orders are placed on either Pretoria or Newcastle Works to Iscor's option.
3. All prices are subject to a settlement discount of 2 1/2%, provided payment is made in accordance with our General Conditions of Sale.
4. All items are subject to an 'overage' or 'underage' in terms of pages P1 & S1 par. 3 and par.6
5. Rounds are sold at a price per metric ton (1 000 kilograms). Any reference to the number of coils or lengths on the invoice or consignment note is for information only.
6. Extras and deductions quoted herein are per metric ton (1 000 kilograms). Each extra is separate and distinct.
7. Prices and extras are those ruling on date of dispatch and are subject to change without notice.

1979-11-01

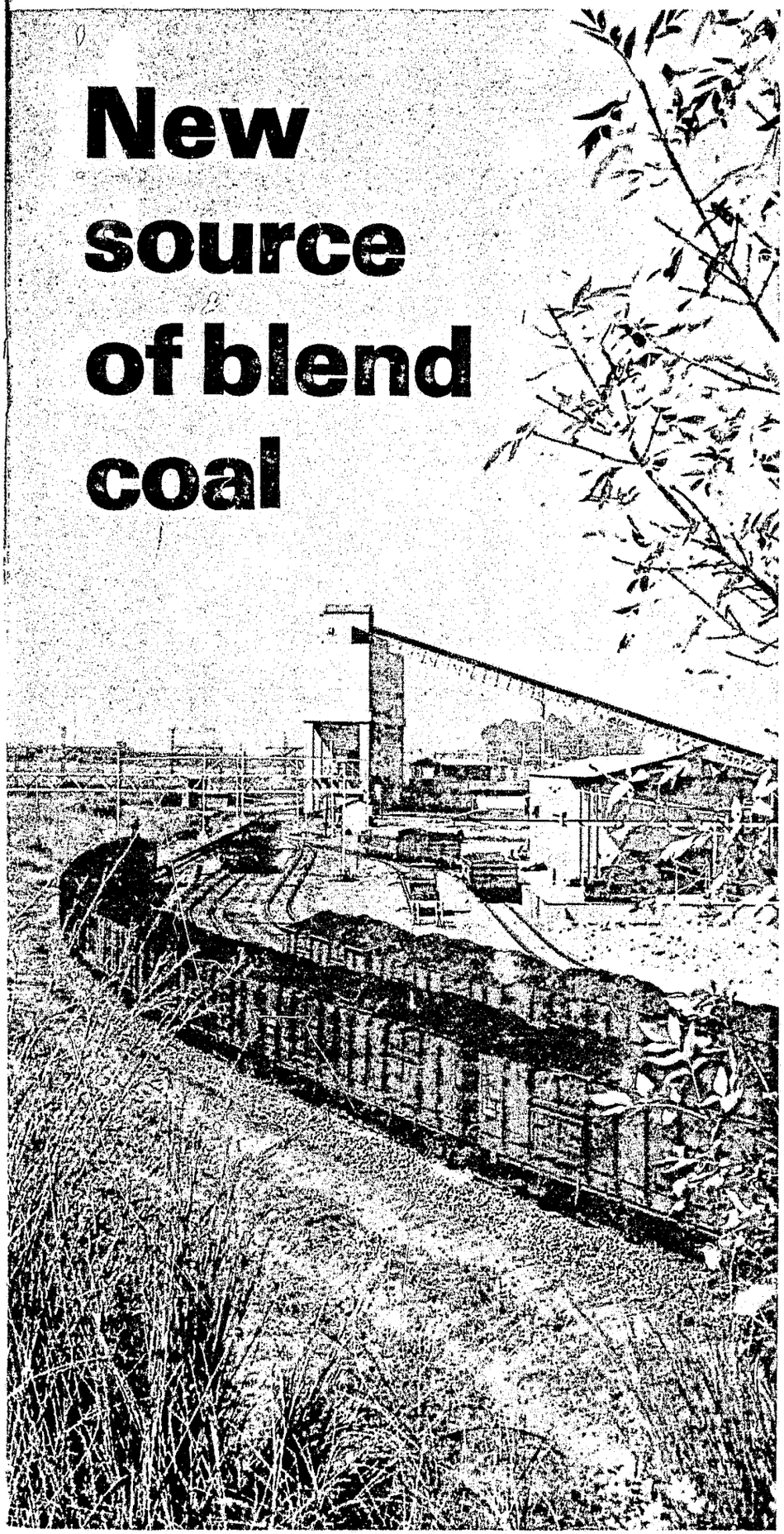
YSKORNUUS

ISCOR NEWS

NOVEMBER 1977

By die H.P.K. as Nuusblad geregistreer — Registered at the G.P.O. as a Newspaper

New source of blend coal



Blend coking coal in trucks destined for Iscor's Newcastle Works.

Mengkookssteenkool in trokke bestem vir Yskor se Newcastle-werke.

THE FULL commissioning of the Roy Point section of the Kilbarchan colliery near Newcastle in northern Natal adds a new source of blend coking coal to the Corporation's existing suppliers of this commodity. The project for developing Roy Point was launched as a tripartite agreement between General Mining & Finance Corporation Ltd, the Electricity Supply Commission (Escom) and Iscor.

During 1974, General Mining agreed to supply 480 000 tons per annum of blend coking coal to the Corporation, which necessitated the development of a new section at Kilbarchan. The Roy Point adit was completed in April 1976, and the section came into full production a year later.

At Roy Point, emphasis is being placed on utilizing a coal source to its best advantage in the interests of both supplier and consumers. From the Corporation's viewpoint, it is a major breakthrough, in that the delivery to Iscor of a product of consistent quality is made possible by the beneficiation facility financed by the Corporation and the opportunity of diverting a middlings product to Escom. This facility also results in Escom receiving a satisfactory product whilst at the same time benefiting from an increased total output which brings about a reduced escalated unit price.

Simultaneously, the method introduced at Kilbarchan means that the Republic has once again taken the lead in the processing of steam coal into two products for entirely different applications. This has in a way been forced upon Iscor owing to the limited resources of

Many steelmakers in the world have already expressed the view that they would not even consider producing molten iron by using coke from coal of such a low grade as is available in SA. Therefore, any contribution by the coal mining industry to improve quality can only be to the benefit of the Corporation and the country.

Whilst the blend coking coal delivered to Iscor from Kilbarchan may not necessarily be classified as a low-ash coal, it is one of the lower ash coals (with low volatile content) in the Corporation's blends, with numerous advantages, e.g. a one per cent ash reduction in blend coking coal charged into the coke ovens at present represents a saving of R3 per ton of input.

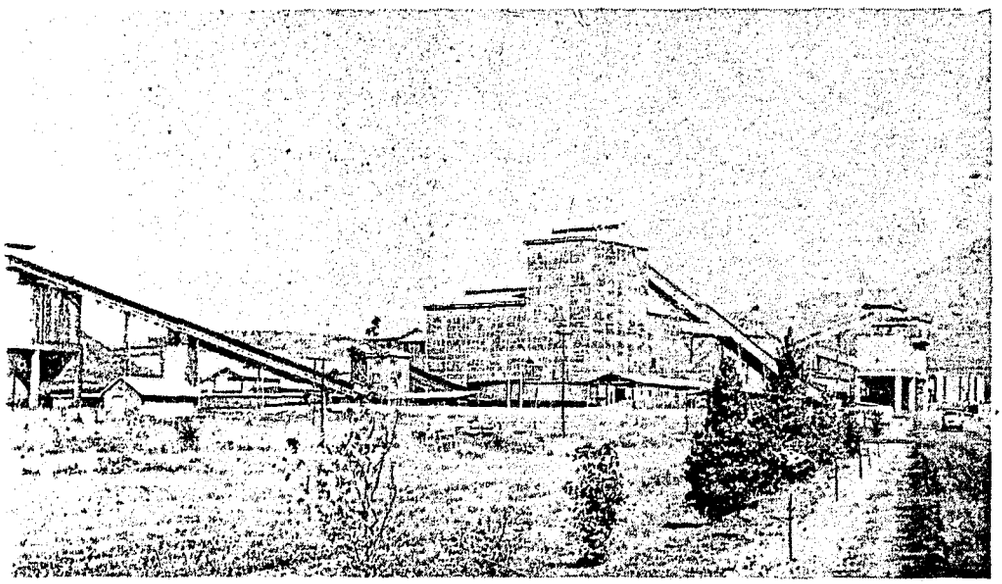
The private sector is currently supplying approximately 80 per cent of the Corporation's total metallurgical coal requirements, General Mining's share coming to 33 per cent and Kilbarchan in turn providing 8 per cent. This mine is at present producing more than 240 000 tons of raw coal a month and selling on average 40 000 tons of prepared coal to Iscor and 125 000 tons to Escom.

Mining at Roy Point is by the bord and pillar method, all production being mechanized. The seam, which varies in depth from 2 to 130 m from surface with undulations in certain areas, is reached by an adit from which the coal is conveyed by a 4,7 km overland cable belt conveyor passing underneath the Newcastle-Ladysmith highway to Kilbarchan, where it is delivered to a silo with a capacity of 1 000 tons. Coal from the Kilbarchan section is delivered to a 1 500 ton silo.

Withdrawals from both silos take place at a rate of 650 tons an hour at a ratio of 4 : 3 Kilbarchan to Roy Point, and mixed.

After primary screening, the +50 mm coal is fed to the Chance plant and the -50 mm material is transferred to raw coal bunkers for further screening.

Coarse coal (50 x 19 mm)



An outside view of the coal preparation plant (the centre building).

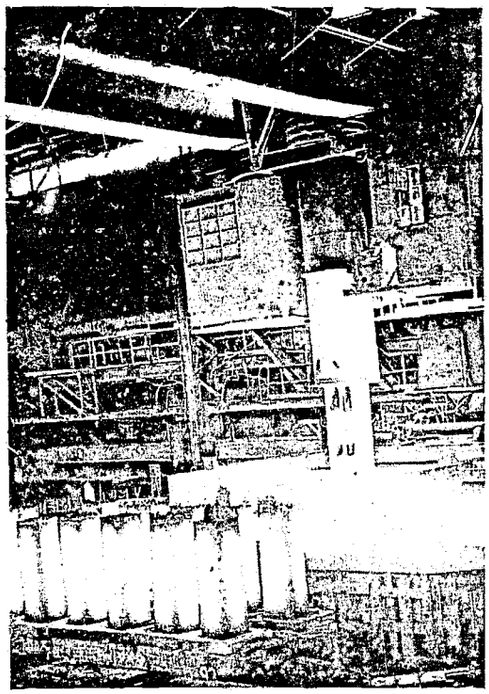
'n Buite-aansig van die steenkool-bereidingsaanleg (die gebou in die middel).

The plaque commemorating the official opening of Roy Point.

Die plaat ter herdenking aan die amptelike opening van Roy Point.

Kilbarchan's incline shaft chair lift.

Kilbarchan se skuinsskag-stoelhyser.



Voorblad

Staalgietblokke by die diepoonde in die Pretoria-werke.

Cover

Steel ingots at the soaking pits in the Pretoria Works.

YSKORNUUS
ISCOR NEWS

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DIE TYDSKRIF VAN DIE SUID-AFRIKAANSE YSTER EN STAAL INDUSTRIËLE KORPORASIE, BEPERK

THE JOURNAL OF THE SOUTH AFRICAN IRON AND STEEL INDUSTRIAL CORPORATION, LIMITED

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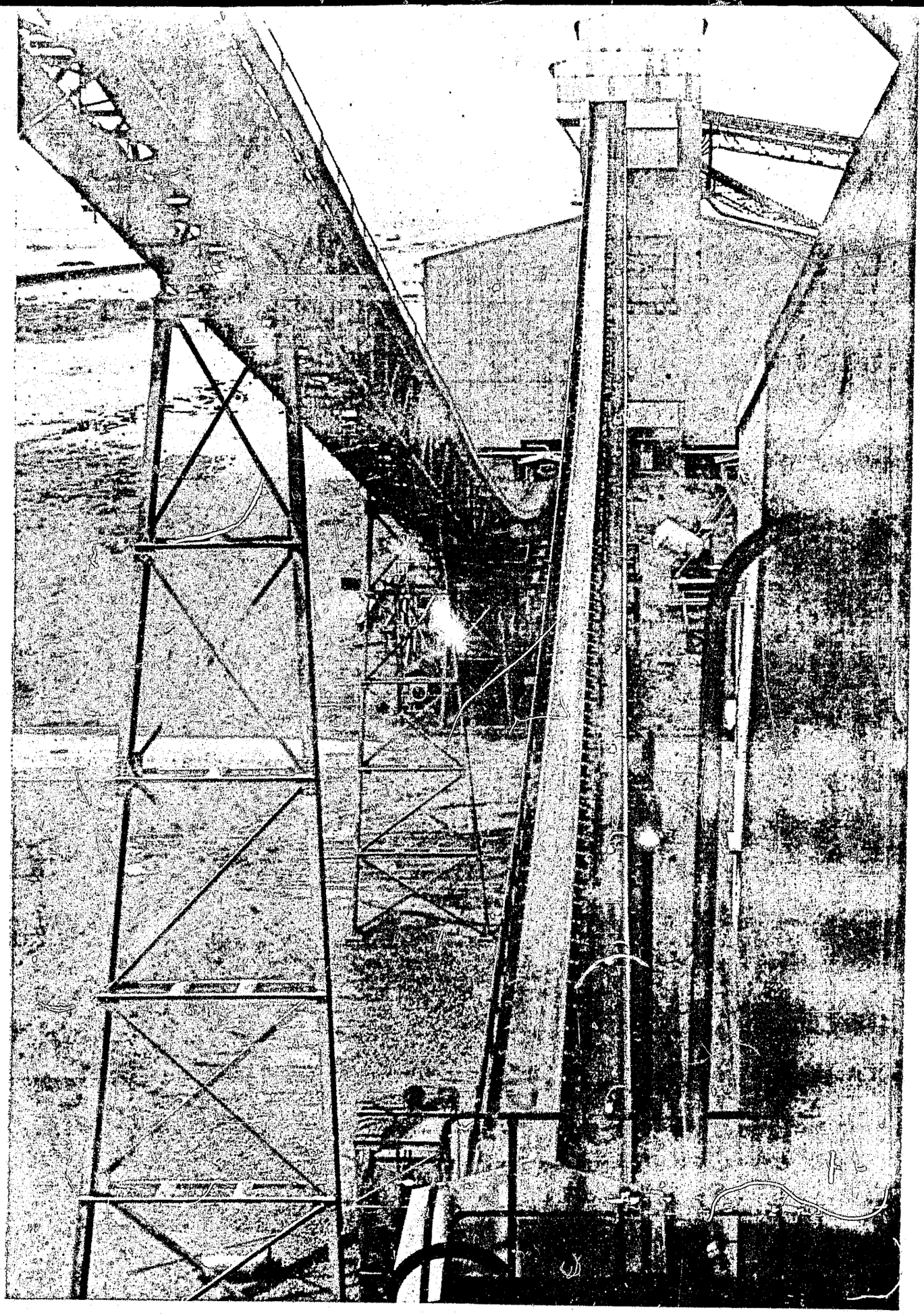


Vervoerbande, Sishen.

Gedruk deur Perskor, Doornfontein, Johannesburg

DIE WÊRELD se grootste konvensionele grootmaat-ertsdraer en verreweg die grootste skip op die Suid-Afrikaanse register, die *Sishen,* het verlede maand met 'n vrag ystererts uit Saldanhabaai op sy eerste vaart na Japan vertrek. Die skip, wat teen 'n koste van R28-miljoen in Japan gebou is, behoort aan Sishen Shipping (Edms) Beperk, 'n maatskappy wat gesamentlik deur Safmarine en Yskor gestig is.

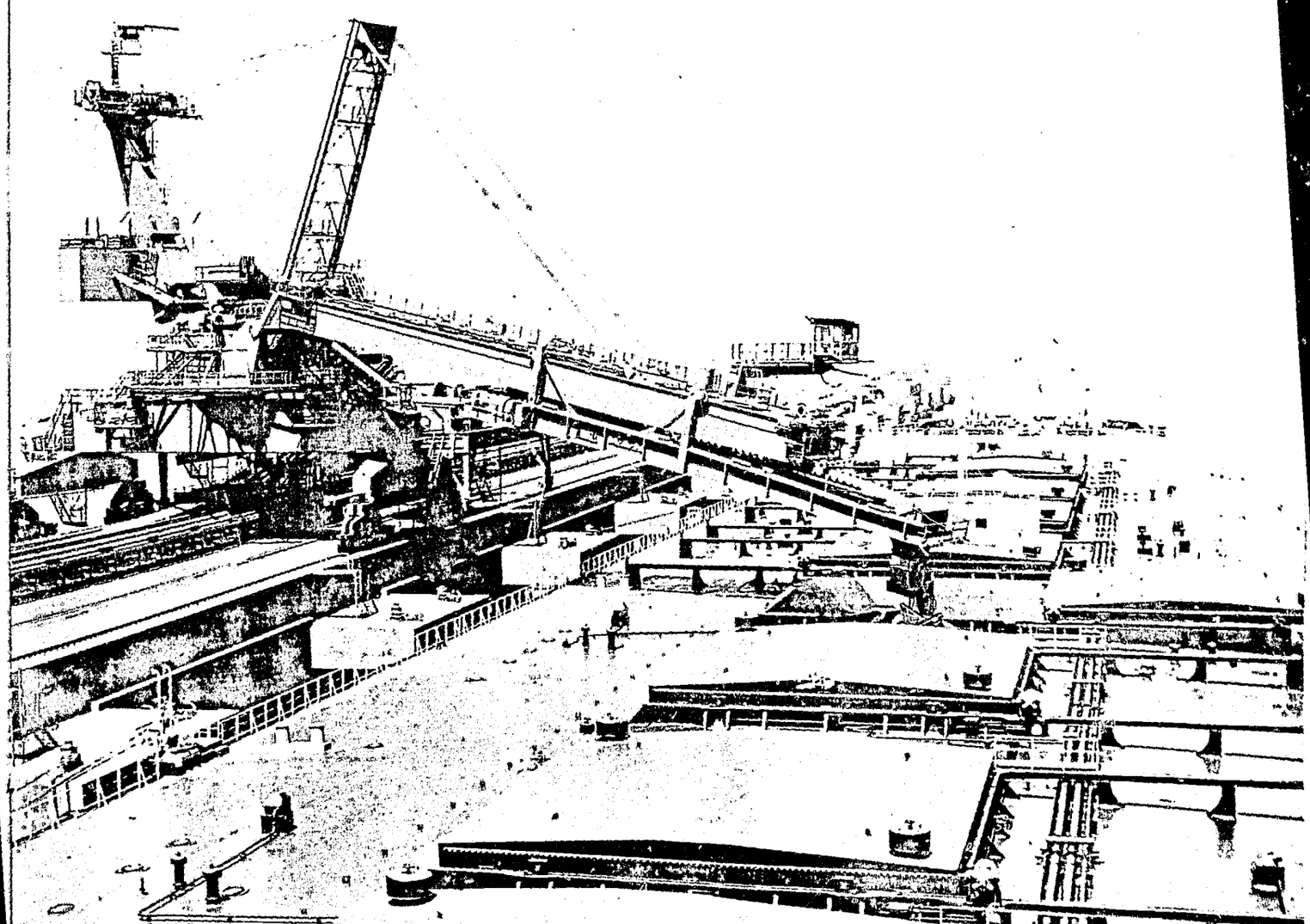
Die *Sishen* is in 'n rekordtyd gebou: minder as drie maande nadat die kiel gelê is, is hy te water gelaat deur mev. Nicolette Muller, eggenote van dr. T. F. Muller, die Voorsitter van Yskor. Die skip het 'n dienssnelheid van 15½ knope met 'n vol vrag van 169 378 ton, en een rondvaart tussen Saldanhabaai en 'n reeks hawens in Japan sal in 54 dae afgelê word. Dit beteken dat hy 6½ rondvaarte per jaar sal voltooi en in die proses meer as eenmiljoen ton erts sal vervoer.

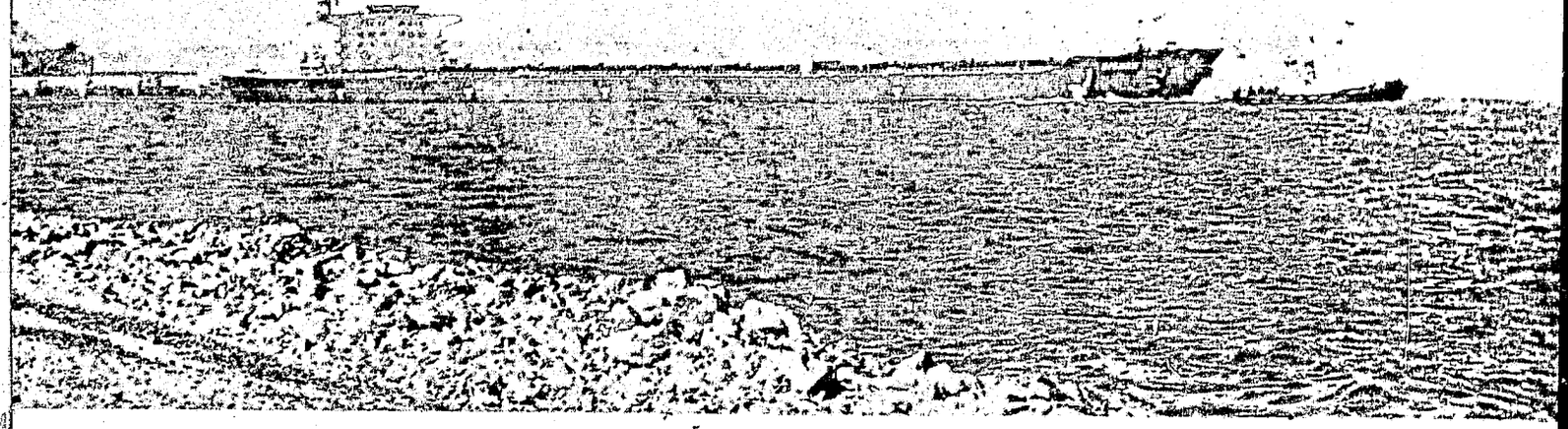
By geleentheid van die vertrek van die *Sishen* met sy eerste vrag erts was dr. Muller, mnr. J. P. Coetzee, Besturende Direkteur van Yskor, ander Yskor-beamptes, die Voorsitter en die Besturende Direkteur van Safmarine, mnre. J. J. Kitshoff en M. de W. Marsh, teenwoordig, asook verteenwoordigers van Japanse handelsmaatskappye, almal met hul gades. Mev. Muller het 'n skildery van 'n Namakwalandse veldtoneel, deur die kunstenaar David Botha, aan die skip geskenk. Dr. Muller se geskenk was 'n Japanse pop in tradisionele drag.

Briefly

THE world's largest conventional bulk ore carrier and by far the largest ship on the South African register, the Sishen, departed from Saldanha Bay with its first cargo on its maiden voyage last month. Built in Japan in record time, the vessel was launched by Mrs. Nicolette Mulder, wife of Iscor's Chairman, Dr. T. F. Muller. The Sishen has a capacity of 169 378 tons and a service speed, when fully laden, of 15½ knots. A circular journey between Saldanha Bay and a series of Japanese ports will take 54 days, thus enabling the ship to complete about 6½ trips a year, conveying more than one million tons of ore in the process.

Die Sishen *word gelaai.*
The Sishen *being loaded.*





Die Suid-Afrikaanse ertsdraer, Sishen, verlaat Saldanhabaai met sy eerste vrag ystererts.

The South African ore carrier, Sishen, leaving Saldanha Bay with her first cargo of iron ore.

Die Sishen se eerste vaart

Dr. T. F. Muller (middel), Voorsitter van Yskor, in gesprek met mnr. M. de W. Marsh (regs), Besturende Direkteur van Safmarine, en die gesagvoerder van die Sishen, kapt. M. Fowkes. Die Japanse pop was 'n geskenk van dr. Muller.

Dr. T. F. Muller (centre), Chairman of Iscor, in conversation with Mr. M. de W. Marsh (right), Managing Director of Safmarine, and the master of the Sishen, Capt. M. Fowkes. The Japanese doll was a present from Dr. Muller.

Mev. Nicolette Muller, eggenote van die Voorsitter van Yskor, dr. T. F. Muller, by die skildery van 'n Namakwalandse veldtoneel wat sy aan die Sishen geskenk het.

Mrs. Nicolette Muller, wife of Iscor's Chairman, Dr. T. F. Muller, with the painting of a Namaqualand veld scene which she presented to the Sishen.

floats to provide a major portion of the buoyancy required to float the mass of the structure.

There are three legs or columns. They are cylindrical and attached to the mat, extending through the platform to support the mass of the platform and skid unit when on location. The columns also serve to raise or lower the mat when changing location.

The skid unit carries the derrick and draw works, and it can be moved traversely 2,6 m off centre port and starboard and longitudinally 6,5 m; the platform is 48,8 m long, 33,5 m wide and varies in height from 4,8 to 12,2 m, with a slot of 15,2 m square. The cylindrical columns are 94,1 m long and 3,2 m in diameter, with a mass of 400 tons each. The skid unit is 14 m square, with a height of 6,2 m.

The platform is equipped with two cranes to handle all drill piping and to assist in maintenance operations. It houses all the mechanical and electrical equipment required for the drilling operation and treatment on location, this equipment being about 1 000 tons in mass. The platform is of modular construction and consists of 32 units, each pre-assembled in approximately 50 ton sections.

The mat contains various tanks positioned in such a manner that they may be used for ballasting in order to position the oil rig on the ocean floor for drilling.

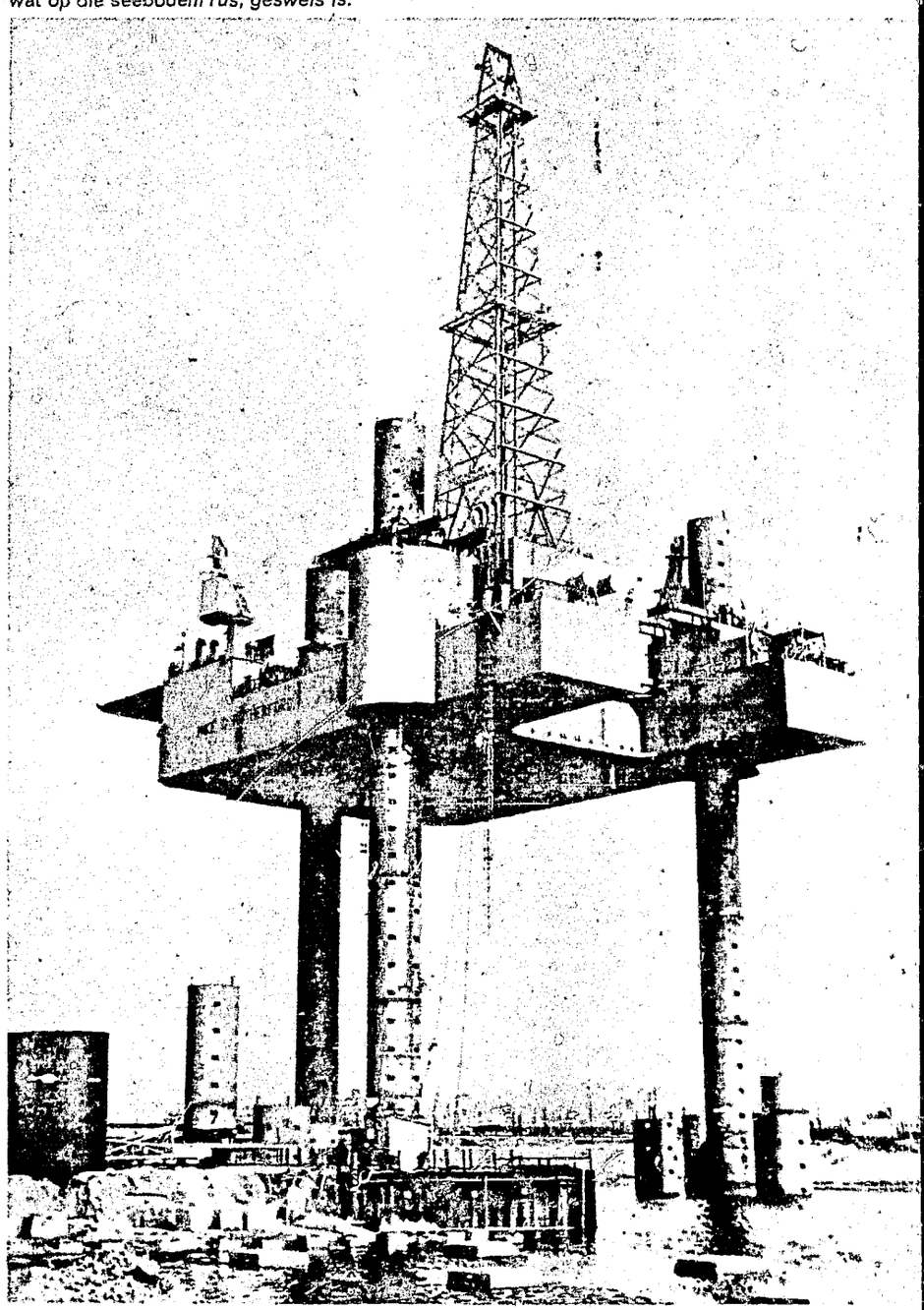
The columns were manufactured by Vecor at Duncanville, Vereeniging, and a great degree of accuracy was required. Pinholes used in the jacking system, are cut into the columns at 1,8 m intervals. The columns were delivered to the offshore site in 8,2 m lengths of approximately 40 tons each. These lengths had to be erected with the use of skid rails and hydraulic jacks, while the platform was being jacked up the columns, because no jacks existed in the country to erect the columns in single units.

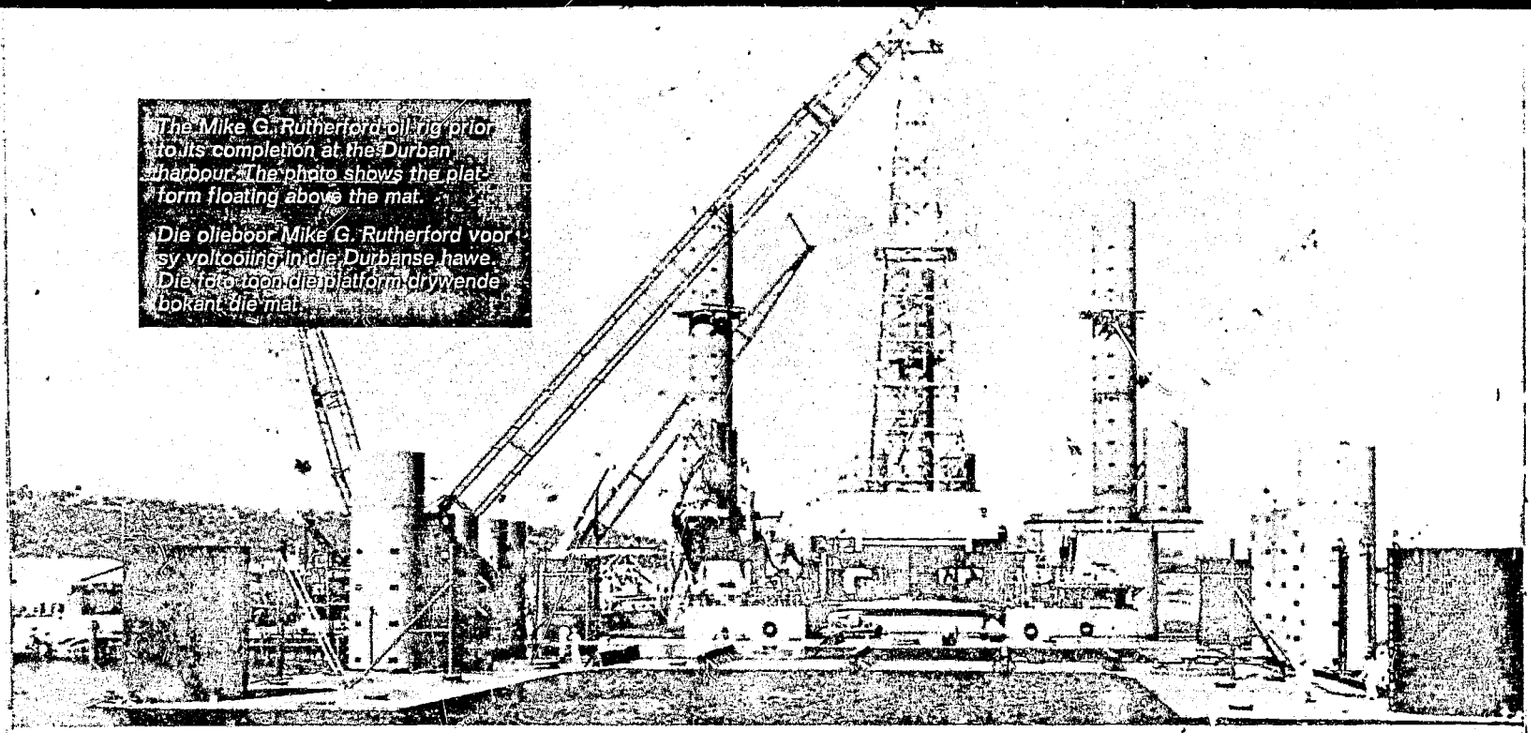
KORTLIKS

'N OLIEBOORTORING wat meer as 3 300 ton Yskor-staal bevat, is tans in die Golf van Mexiko besig om vir olie te boor. Hy dra die naam Mike G. Rutherford en is deur Dorman Long Vandeelji Korporasie, Beperk (Dorbyl), wat die kontrak van R19-miljoen in weerwil van internasionale konkurrensie verower het, in Durban gebou. Die kliente was Field International Corporation, van die VSA, en Swire Pacific Offshore Services, van Hongkong. Die ontwerp is gedoen deur Bethleham Steel Corporation, van die VSA, en die toring is gebou volgens die vereistes van die American Bureau of Shipping Rules. Met 'n totale massa van 6 000 ton (toerusting ingesluit), bevat die toring 4 377 ton staal in sy konstruksie, waarvan 3 368 ton van Yskor verkry is.

The Mike G. Rutherford while the legs were being welded to the mat, which was resting on the sea-bed.

Die Mike G. Rutherford terwyl die bene aan die mat, wat op die seebodem rus, gesweis is.





The Mike G. Rutherford oil rig prior to its completion at the Durban harbour. The photo shows the platform floating above the mat.

Die olieboor Mike G. Rutherford voor sy voltooiing in die Durbanse hawe. Die foto toon die platform drywende bokant die mat.

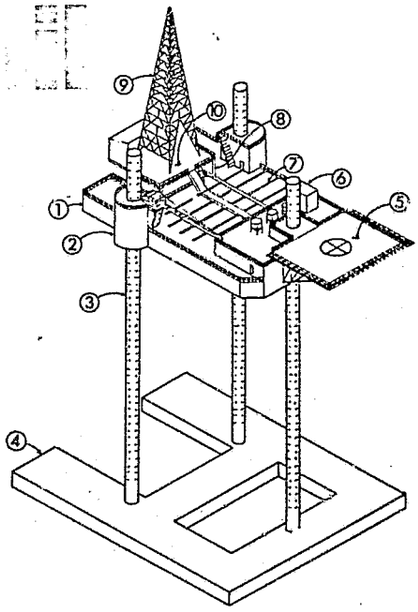
Iscor steel to probe for oil

AN OFF-SHORE rig containing more than 3 300 tons of Iscor steel in its structure, is now exploring for oil in the Gulf of Mexico. The rig, named the Mike G. Rutherford, was built by Dorman Long Va[illegible]ijl Corporation Limited ([illegible]yl) — which obtained the R19 million contract in the face of international competition — in the Durban harbour and towed to its destination where it arrived recently.

The rig was the first of its kind built in South Africa. The customers were Field International Corporation, of the USA, and Swire Pacific O[illegible]ore Services, of Hong Kong. Designed by the Bethlehem Steel Corporation, of the USA, the rig was built to the requirements of the American Bureau of Shipping Rules. The method of construction was unique as it had not been practised before.

Construction of the rig commenced in November 1975 on a site — an old refuse dump alongside the Umhlatuzana River canal entering the Durban Harbour — leased from the South African Railways & Harbours. The completed rig reached its destination in August this year.

The steel products used in its construction were mainly plate and sections amounting to 4 377 tons, of which 3 368 tons were obtained from Iscor.



A drawing of the Mike G. Rutherford oil rig: 1 platform; 2 jack house; 3 column; 4 mat; 5 heliport; 6 control house; 7 pipe rack; 8 lower carriage; 9 derrick; 10 upper skid unit and drill floor.

'n Tekening van die olieboor Mike G. Rutherford: 1 platform; 2 domkragkamer; 3 kolom; 4 mat; 5 helihawe; 6 beheerkamer; 7 pyprak; 8 onderstutwerk; 9 boortoring; 10 boonste skuifeenheid en boorvloer.

The rig, having a total mass of 6 000 tons (equipment included), consists of four main parts — the mat, platform, legs and skid unit.

The platform, which has a heliport and sufficient accommodation for 78 people, is a buoyant flat rectangular barge-like structure with a slot in one end. When on location, it is raised above the surface of the water to allow wave clearance, but when moving, it

New Iscor products

Mr. J. Herbst, Finishing Officer, with examples of the range of H-sections (parallel flange) and I-sections (parallel flange) produced by heavy mill No. 2. The dimensions of the H-sections are, from the left: 152 x 152 mm, 203 x 203 mm, 254 x 254 mm and 305 x 305 mm. The dimensions of the I-sections are, from the right: 203 x 133 mm, 254 x 146 mm, 305 x 165 mm, 356 x 171 mm, 406 x 178 mm, 457 x 191 mm and 533 x 210 mm.

Mnr. J. Herbst, Voltooiingsbeampte, by voorbeelde van die reeks H-profiele (parallelflens) en I-profiele (parallelflens) geproduseer deur swaarwalsery nr. 2. Die afmetings van die H-profiele is, van links: 152 x 152 mm, 203 x 203 mm, 254 x 254 mm en 305 x 305 mm. Die afmetings van die I-profiele, van regs, is: 203 x 133 mm, 254 x 146 mm, 305 x 165 mm, 356 x 171 mm, 406 x 178 mm, 457 x 191 mm en 533 x 210 mm.

Kortliks

DIE nuwe swaarwalsery nr. 2 wat teen die einde van verlede jaar in gebruik geneem is by Yskor se Pretoria-werke (kyk YSKORNUUS, November 1976), het onlangs in volle produksie gekom ten opsigte van 'n omvattende reeks H-profiele (parallelflens en heipale), I-profiele (parallel- en tapsflens) en kanaalprofiele. Die verskeidenheid swaarprodukte wat tans aangebied word, is bedoel om te voorsien in die behoeftes van die bou-, konstruksie- en ingenieursbedrywe.

THE NEW HEAVY mill No. 2, commissioned at the Pretoria Works towards the end of last year (see ISCOR NEWS, November 1976), recently reached the full production stage in respect of a comprehensive range of H-sections (parallel flange and piles), I-sections (parallel and taper flange) and channels. Within a period of six months more than fifty different new products had been successfully rolled. The variety of heavy mill products now being offered is intended to meet the needs of the structural, construction and engineering industries.

H-sections range from 152 x 152 mm to 305 x 305 mm and I-sections (parallel flange) from 203 x 133 mm up to 533 x 210 mm. Previously I-sections (parallel flange) had not been rolled wider than 457 mm in the Republic of South Africa.

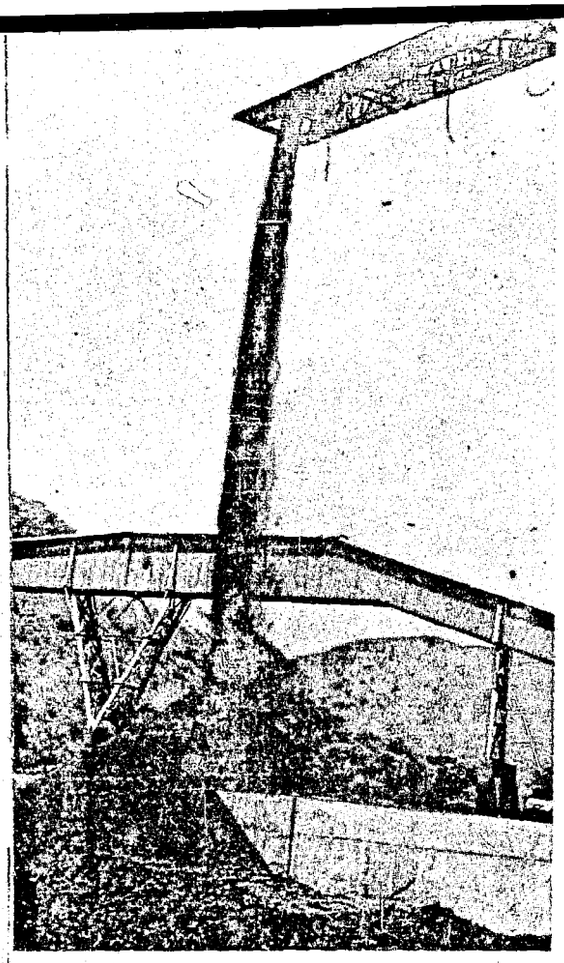
The new range of channels rolled are of the dimensions 200 x 75 mm, 220 x 80 mm, 240 x 85 mm, 260 x 90 mm, 280 x 95 mm and 300 x 100 mm.

All three types of these structural products are available in lengths of up to 18 m. Longer non-standard lengths are available on enquiry.

The dimensions and tolerances on H-sections and I-sections for the domestic market are in accordance with the requirements of BS 4: Part 1: 1972. Dimensions and tolerances on channels comply with the requirements on DIN 1026.

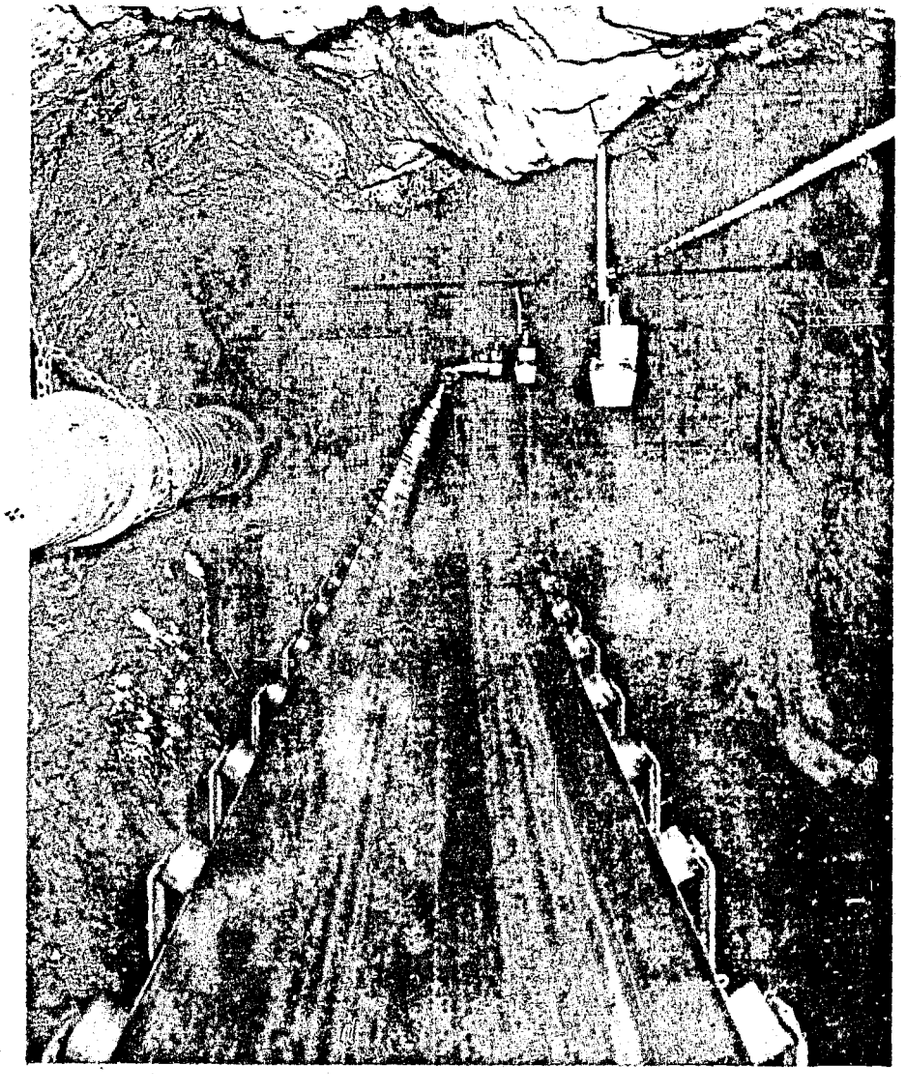
The steel qualities in which all three types are offered as standard in the domestic market are BS 4360 Gr. 43A, BS 4360 Gr. 50B, BS 4360 Gr. 55C, and Cor-Ten.

Tests are at present being conducted at heavy mill No. 2 with a view to enabling the Pretoria Works to roll rails according to the universal method.



Ystererts uit Donkerpoort word op die stapel gestort.

Iron ore from Donkerpoort is deposited onto the stack.



'n Gedeelte van die 520-m-lange ondergrondse vervoerband waarmee erts vanaf die vergruiser na die stapel geneem word.

Part of the 520 m long underground conveyor belt for transporting ore from the crusher to the stack.

gruiser oor sy eie verhittingstelsel wat by sy verkoelingstelsel ingelyf is. Laasgenoemde het ingeboude sekerings wat verhoed dat die olie oorverhit raak, terwyl die vergruisermotor op soortgelyke wyse beskerm word.

Ontginde ystererts word met meganiese laaigrawe en vooremmerlaaiers op agterstort-vragwaens gelaai vir vervoer na die ingange van die noordelike en suidelike stortgeute waardeur die erts die vergruiser bereik.

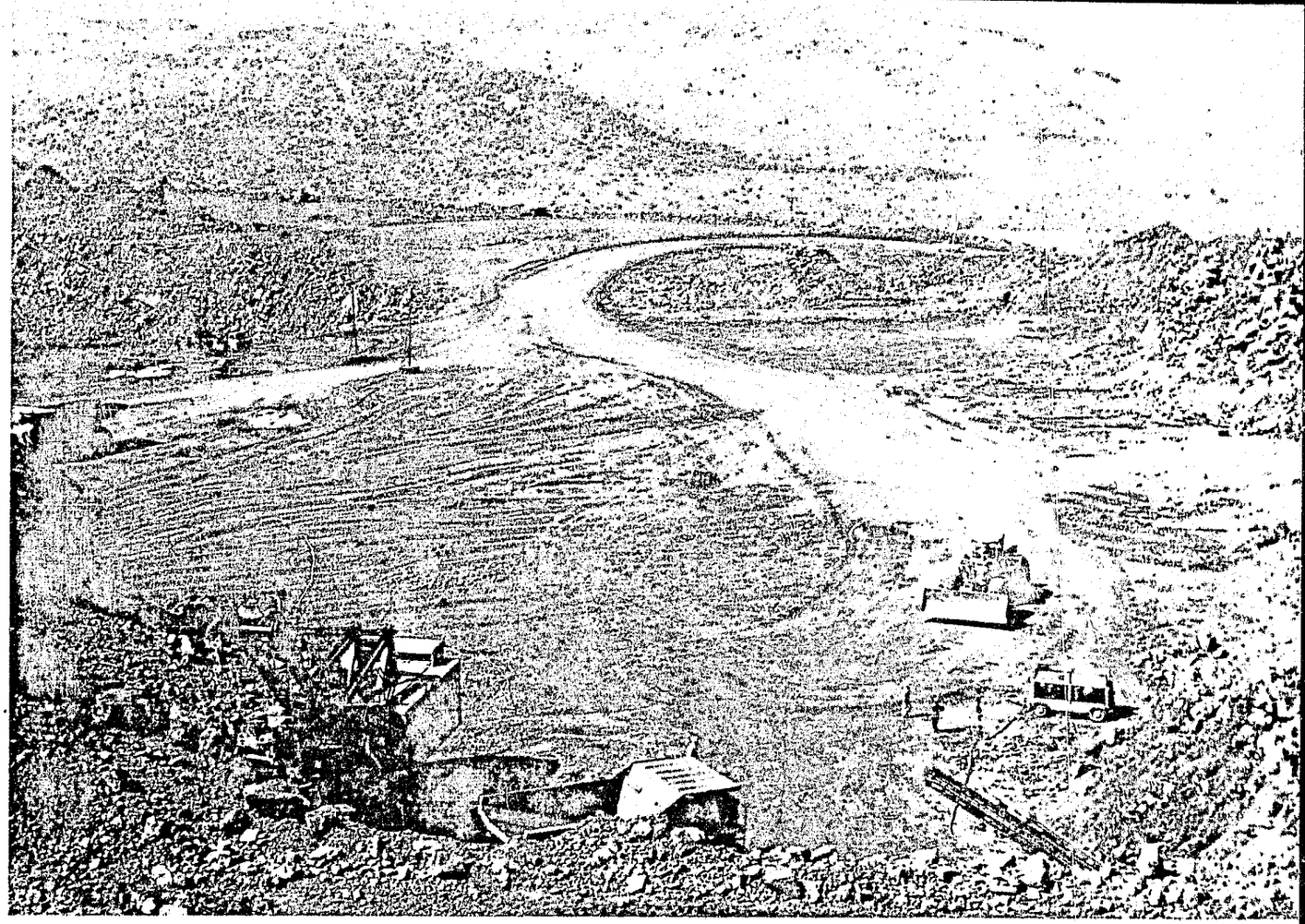
Twee panvoerders, waarvan die vermoëns verstel kan word tot sowat 800 ton per uur elk, voer die vergruiser. Na vergruising tot ongeveer –150 mm, word die ystererts in 'n stu-kas gestort. Die ertsvlak in die kas word met radioisotope beheer sodat dit nie te vol word of te leeg loop nie. Vanuit die stu-kas voer 'n panvoerder, wat 'n vaste voervermoë van nagenoeg 800 ton per uur het, die erts op die 520-m-lange vervoerband wat die grondstof na die bogrondse ertsstapel neem.

Die ertsstapel kan ongeveer 60 000 ton bevat. In 'n herwinningstonnel onder die stapel is twee verskuifbare panvoerders wat drie onttrekpunte bedien, vanwaar die erts op 'n vervoerband gelaai word. Dié vervoerband sluit aan by 'n bestaande een waarmee die grondstof na die ertsveredelingsaanleg geneem word.

By die onttrekpunte is 'n elektroniese massameter wat 1 000 m verder in die operateurskantoor by die veredelingsaanleg registreer. Dit maak dit moontlik dat die operateur by die onttrekpunte in kennis gestel kan word om toevoerhoeveelhede te reguleer volgens benodigdhede by die aanleg.

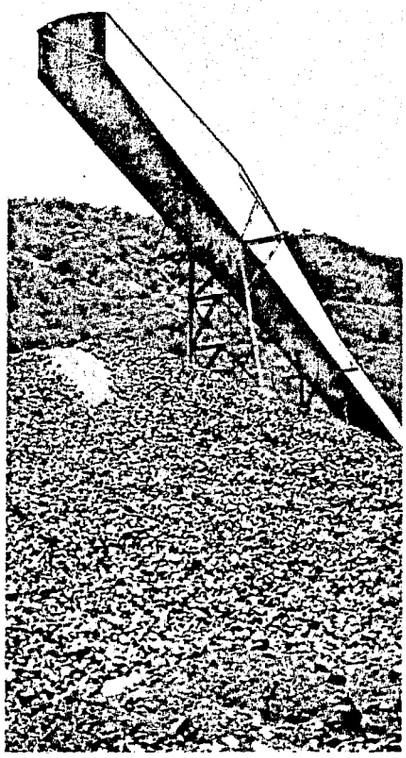
'n Derde ertsstort, wat van die groef se 120-m-vlak na die 205-m-vlak strek, is onlangs in Donkerpoort in gebruik geneem. Die ystererts wat uit hierdie nuwe stort onttrek word, word in trokke wat deur elektriese loko's getrek word, na die ingange van die noordelike en suidelike stortgeute vervoer om daarvandaan die vergruiser te bereik. Die inbedryfstelling van die derde stort maak dit onnodig dat vragwaens vanaf die groef se 120-m-vlak die groot afstand na die noordelike en suidelike geute moet aflê om erts te stort.

Twee loko's en tien trokke bedien die derde ertsstort.



'n Produksietoneel by Donkerpoort.

A production scene at Donkerpoort.



'n Stapel ystererts onder die mond van die vervoerband.

A stack of iron ore under the conveyor belt outlet.

Mnr. J. L. van den Berg, Mynopsigter, Thabazimbi, wys na die rooster van Donkerpoort se nuwe ertsstort.

Mr. J. L. van den Berg, Mine Overseer, Thabazimbi, points at the grill of Donkerpoort's new ore pass.

Induksie-verharding geskied deur 'n wals teen 'n beheerde tempo vertikaal deur 'n induksieklos te voer, terwyl 'n elektriese stroom van hoë frekwensie deur die wals gestuur word om dit te verhit. Terwyl die wals die klos verlaat, word dit met water afgekoel.

Na verharding is die wals uiters hard, maar dit is te bros om in dié toestand gebruik te word en word daarom eers getemper. Geboorde walse word met elektriese verwarmers en soliede walse in elektriese oonde teen die vereiste temperatuur vir 'n bepaalde tyd deurverhit en daarna afgekoel.

Die wals word finaal gemasjineer en geslyp, en na inspeksie om te verseker dat dit dimensioneel reg en sonder gebreke is, is dit gereed vir 'n nuwe dienslewe.

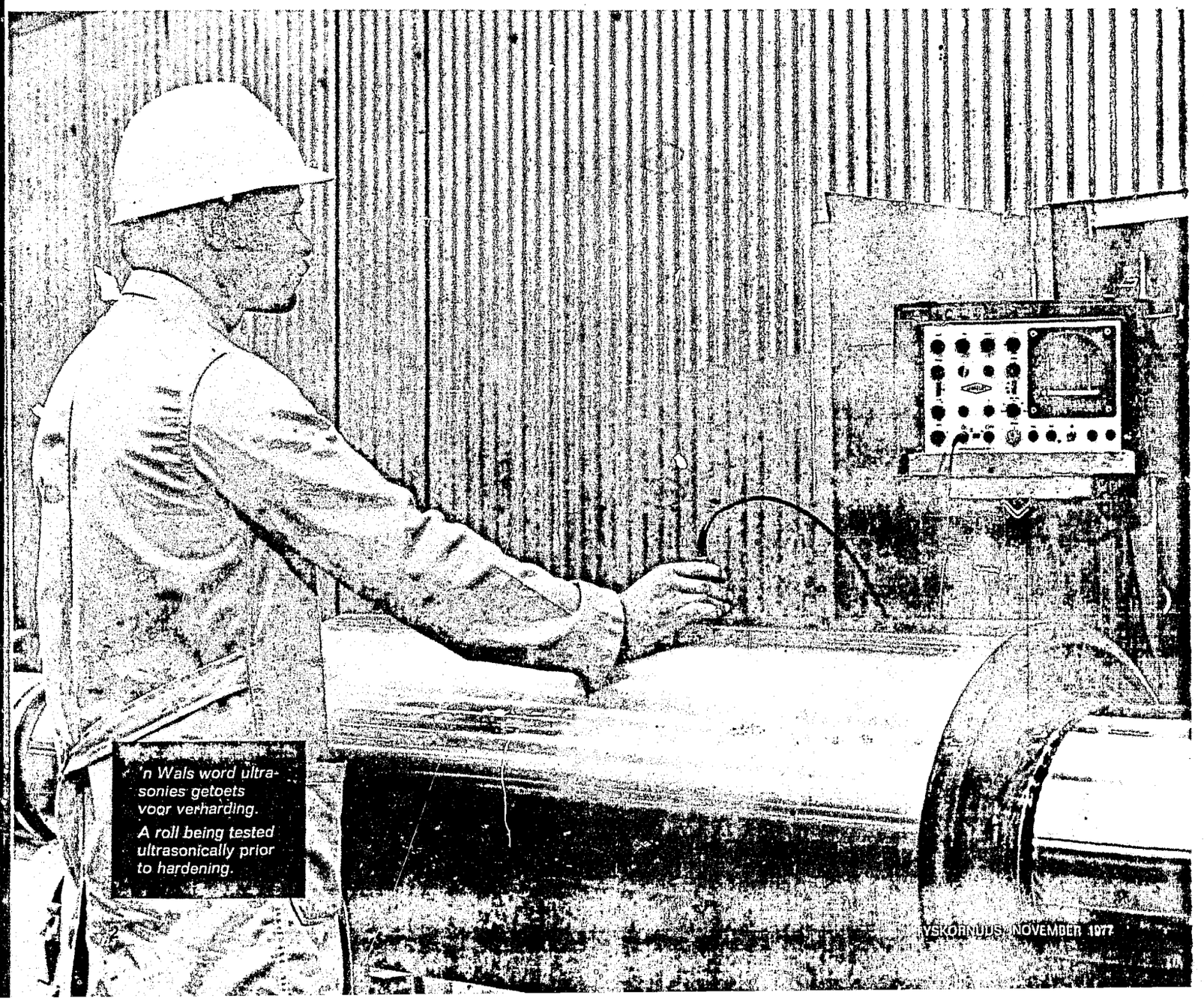
Die gehalte en lewensduur van so 'n hervervaardigde wals staan gelyk aan dié van 'n nuwe wals.

'n Treffende voorbeeld van die besparings wat gedurende die afgelope boekjaar bewerkstellig is, is die hervervaardiging van 94 walse wat hul lewensduur by die vyfstelling-tandemkoudwalsery in die Suidwerke uitgedien het, tot walse vir die tweestelling-temperwalsery. Om 94 nuwe walse vir laasgenoemgebruik te moes koop, sou R470 000 gekos het. Die hervervaardigingskoste was 'n raps minder as R33 000, dus het die besparing nie minder nie as R437 000 bedra!

Ook gegote walse wat by die warmwalswerke geskrot is, is al hervervaardig vir gebruik in ander walserye. Walse wat byvoorbeeld by die Noordwerke se 2 050-mm-warmbandwalsery geskrot is, is hermasjineer en word heel suksesvol by die Suidwerke se warmbandwalsery gebruik.

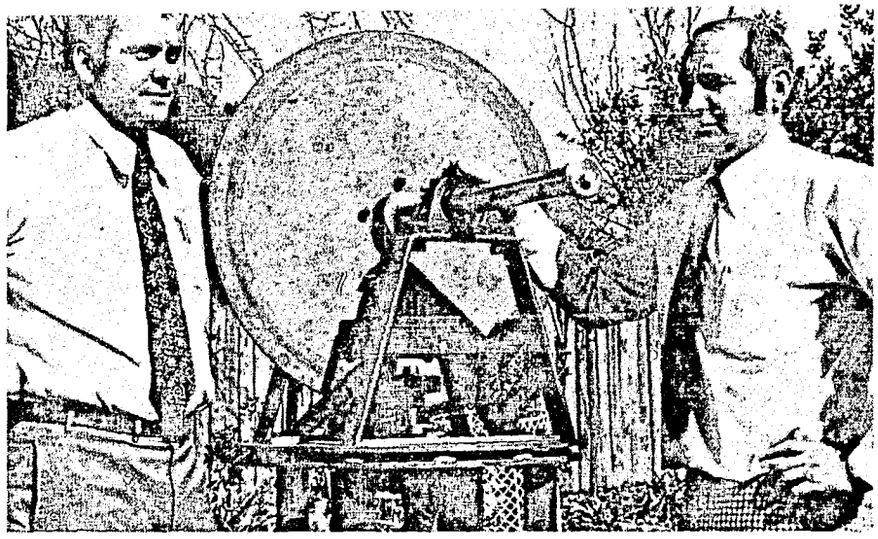
By die Vanderbijlpark-werke is daar tans geen fasiliteite om gegote walse te hittebehandel nie, en hierdie funksie word deur Vikor uitgevoer.

Die hervervaardiging van walse is klaarblyklik van strategiese belang vir Yskor . . . en vir Suid-Afrika. Daarom word beoog om, wanneer die ekonomiese toestand dit toelaat, die fasiliteite verder uit te brei sodat 'n nog groter besparing verwesenlik sal kan word.



'n Wals word ultrasonies getoets voor verharding.

A roll being tested ultrasonically prior to hardening.



The inventor, Mr. C. C. A. Muller (right), and Dr. W. H. Boshoff, directors of Monomore (Pty) Ltd, at a model of the heart of the new windmill — the steel disc which drives the rubber wheel to rotate the driving axle.

Die uitvinder, mnr. C. C. A. Muller (regs), en dr. W. H. Boshoff, direkteure van Monomore (Edms) Bpk, by 'n model van die hart van die nuwe windpomp — die staalskyf wat die rubberwiel aandryf om die as te laat roteer.

Dr. Boshoff examining the pulley which can be driven by a motor or tractor, if necessary. In such a case the axle is disconnected above the pulley.

Dr. Boshoff ondersoek die katrol wat deur 'n motor of trekker aangedryf kan word, indien nodig. In so 'n geval word die as bokant die katrol ontkoppel.

One of the four Monomore windmills erected about four years ago for testing and experimental purposes. Very little maintenance has been found necessary.

Een van die vier Monomore-windpompe wat sowat vier jaar gelede vir toets- en proefdoeleindes opgerig is. Baie min instandhouding is nodig gevind.

Iscor steel and are produced on contract for Monomore. The windmills are available in kit form with erection instruction pamphlets, but are also erected by the distributors if customers so wish. The Mono pumps are supplied to Monomore by Mono Pumps (Africa) (Pty) Ltd.

There are six tower models which are available in three heights — 9, 12 and 15 m — and in two structural strengths: the light structure capable of resisting winds of up to 80 km/h and the heavier one capable of resisting winds of up to 160 km/h. There are three standard fan sizes: 4, 5 and 6 m in diameter. All guarantees comply with South African building standards specifications.

KORTLIKS

'N NUWE metode om windpompkrag aan te wend, is deur 'n Suid-Afrikaanse onderneming, Monomore (Edms) Bpk, van Heidelberg (Transvaal), gepatenteer en die maatskappy maak daarop aanspraak dat dit hom in 'n wêreldleiersposisie op hierdie gebied plaas. In plaas daarvan dat die dryfstang van die windpomp op en af beweeg, roteer die stang soos 'n as en dryf 'n Monopomp in die boorgat aan wat water onder druk lewer. Met gelyke windkrag kan op hierdie wyse tien keer meer water as met 'n konvensionele windpomp verkry word en terselfdertyd kan elektriese krag opgewek word, verklaar die maatskappy.

Die windkrag word deur middel van friksie op die as oorgedra — bo-aan die stang is 'n rubberwiel, aangedryf deur 'n staalskyf wat aan die waaier gekoppel is. Hoewel die geringste wind die waaier laat draai, is voorsiening daarvoor gemaak dat die eenheid in noodgevalle met behulp van 'n motor of trekker aangedryf kan word.

Six sizes of Mono pumps can be used in conjunction with these units: models ES 10, ES 10 S, ES 15, ES 15 S, ES 30 and ES 30 S.

All the bearings in the unit are sealed, and once the unit has been erected no maintenance is required. The rubber wheel might need replacement occasionally.

The two shareholders in the company are Mr. C. C. A. Muller, with whom the idea of the innovation originated, and Dr. W. H. Boshoff, who was approached by Mr. Muller to prepare the patent drawings and later to become a partner. They have since spent more than R70 000 in developing and perfecting the unit.

Wispeco het een van die grootste fabrieke en is die grootste vervaardiger van staaldeure en vensterrame in Suidwes-Afrika. Die firma het in 1965 begin produseer op die huidige perseel in die noordelike nywerheidsgebied, maar op baie kleiner skaal as tans. Aanvanklik is daar slegs vensterrame vervaardig, maar geleidelik is die werksaamhede uitgebrei om ook deure en deurkosyne in te sluit. Vandag bestaan die personeel uit 10 Blankes en 54 Nie-Blankes, en die oppervlakte van die fabriek onder dak beslaan 3 460 m². Al die sinkplaat vir die dak is van Yskor afkomstig. „As gevolg van die heersende ekonomiese slapte het die boubedryf 'n kwaai knou gekry en is die huidige vraag na ons produkte nie na wense nie," verduidelik mnr. Kloot. Die firma verwerk tans ongeveer 70 ton Yskor-staal per maand, maar onder gunstiger omstandighede is sy maandelikse verbruik maklik 100 ton.

Hoewel die privaatsektor nie baie bedrywig is nie, is Wispeco in die gelukkige posisie dat sowel die Administrasie van SWA as die Departement van Bantoe-administrasie en -ontwikkeling met groot uitbreidings in die noordelike Bantoegebiede besig is. Dit behels die bou van woonhuise, skole, klinieke en hostels waarvoor Wispeco al die vensters en deure voorsien.

Behalwe vir die uitbreidings in die Bantoegebiede self, is die Administrasie tans besig met die oprigting van twee nuwe hospitale in die Windhoek-gebied. Dit het vir Wispeco 'n waardevolle kontrak vir vensters en deure beteken.

Die maatskappy vervaardig nie net vensterrame en deure van standaardgrootte nie maar ook ander groottes op aanvraag. 'n Goeie voorbeeld hiervan is die vensters van 'n nuwe kerkgebou in Pionierspark, 'n voorstad van Windhoek. Hierdie vensters is in panele van 30 m lank en 10 m hoog in die mure ingebou. Nog 'n voorbeeld is by 'n uraanmyn, waar spesiale staaldeure vir die kragsentrale met die ongewone grootte van 3 x 3 m vervaardig moes word. „As die verbruiker 'n artikel benodig wat nie verkrygbaar is nie, maak ons dit self," sê mnr. Pretorius. Hy is veral trots op die spesiale staaldeur wat hy vir Wispeco ontwerp het en wat so gewild is dat dit dadelik 'n blitsverkoper geword het.

Vroeër jare het Wispeco ook spykers vervaardig, maar dit was later nie meer lonend om daarmee aan te hou nie. Een van die probleme was dat die lemme vir die masjiene van Kaapstad af gekom het en dat soms lank daarop gewag moes word. Deur bemiddeling van sekere Yskoriane is die masjiene toe aan die Skool vir Blindes op Worcester verkoop, en sover mnr. Kloot se kennis strek, word daardie masjiene tans nog gebruik.

'n Interessante verskynsel in die onderneming se werksaamhede is die feit dat argitekte kom raad vra oor die ontwerp van geboue wat groot vensters het, byvoorbeeld kerke en skole.

„Ons produseer dus nie net nie maar lewer ook 'n diens aan die gemeenskap," verduidelik mnr. Kloot.

Wispeco het nie 'n bepaalde afsetgebied nie, maar sy produkte gaan aan almal in Suidwes wat dit wil koop. Die gebied is groot en die bevolking yl versprei. Interessantheidshalwe noem hy dat Gobabis, wat maar 'n klein dorpie is, se distrik groter as die hele Oranje-Vrystaat is.

Oor Wispeco se toekomsplanne is mnr. Kloot optimisties. Hy verwys in hierdie verband na verskeie persone van oorsee wat kom inligting inwin het oor die toekomstige ontwikkeling van Suidwes-Afrika en oor moontlike deelname daarin.

Die firma is voortdurend besig om te eksperimenteer met nuwe artikels vir die boubedryf. So pas is 'n vloerlys uit staalfynplaat vervaardig om die ou tipe wat gewoonlik van hout gemaak is, te vervang. Nog 'n nuwe produk is 'n stewige gaasdeur van staal, wat groot aftrek in die warm noordelike dele behoort te geniet. Op die oomblik is daar net gaasdeure met houtrame beskikbaar. Mnr. Kloot sê dat, sodra die algemene ekonomiese toestand in Suidwes-Afrika verbeter het, hy hoop om verder uit te brei en 'n nog groter verskeidenheid artikels van staal te kan maak.

BRIEFLY

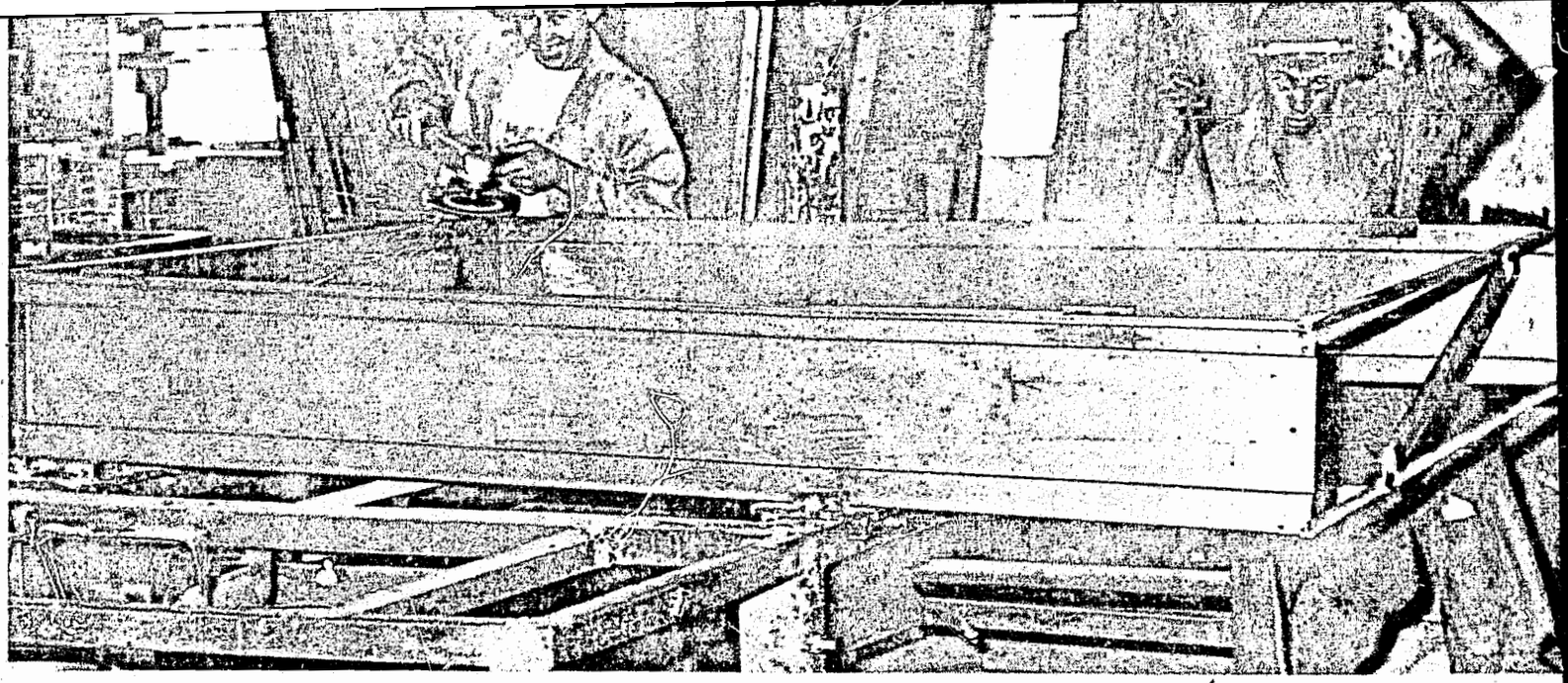
A SUCCESSFUL enterprise for the manufacture of doors, window-frames and other steel products was established in Windhoek by Mr. H. Kloot, manager and co-director of Wispeco (SWA) (Pty) Ltd. This firm is now the main manufacturer of these products and has one of the largest factories in South West Africa.

Although the private sector is not very active in this territory at present, both the Administration of SWA and the Department of Bantu Administration and Development are engaged in vast developments in the northern Bantu areas, erecting houses, schools, clinics and hostels. Wispeco supplies all the windows and doors for these projects. In addition, the company has also won a valuable contract for the supply of windows and doors for two new hospitals being erected in the Windhoek area.

The firm at present processes about 70 tons of Iscor steel per month, but under more favourable conditions its monthly steel consumption easily reaches 100 tons.

Die netjiese staaldeur wat deur Wispeco vervaardig word, is ontwerp deur mnr. J. J. Pretorius, die fabrieksbestuurder (op die foto).

The neat steel door manufactured by Wispeco was designed by Mr. J. J. Pretorius, the factory manager (in the photo).



'n Deurkosyn word gesweis en afgewerk in Wispeco se fabriek in Windhoek.

A door-frame being welded and finished in Wispeco's Windhoek factory.

Produkte vir die boubedryf

Mnr. H. Kloot, bestuurder en mede-direkteur van Wispeco (SWA) (Edms) Bpk.

Mr. H. Kloot, manager and co-director of Wispeco (SWA) (Pty) Ltd.

Mnr. W. Schlange, verkoopsbestuurder, en ook die persoon met die langste diens by Wispeco in Suidwes-Afrika.

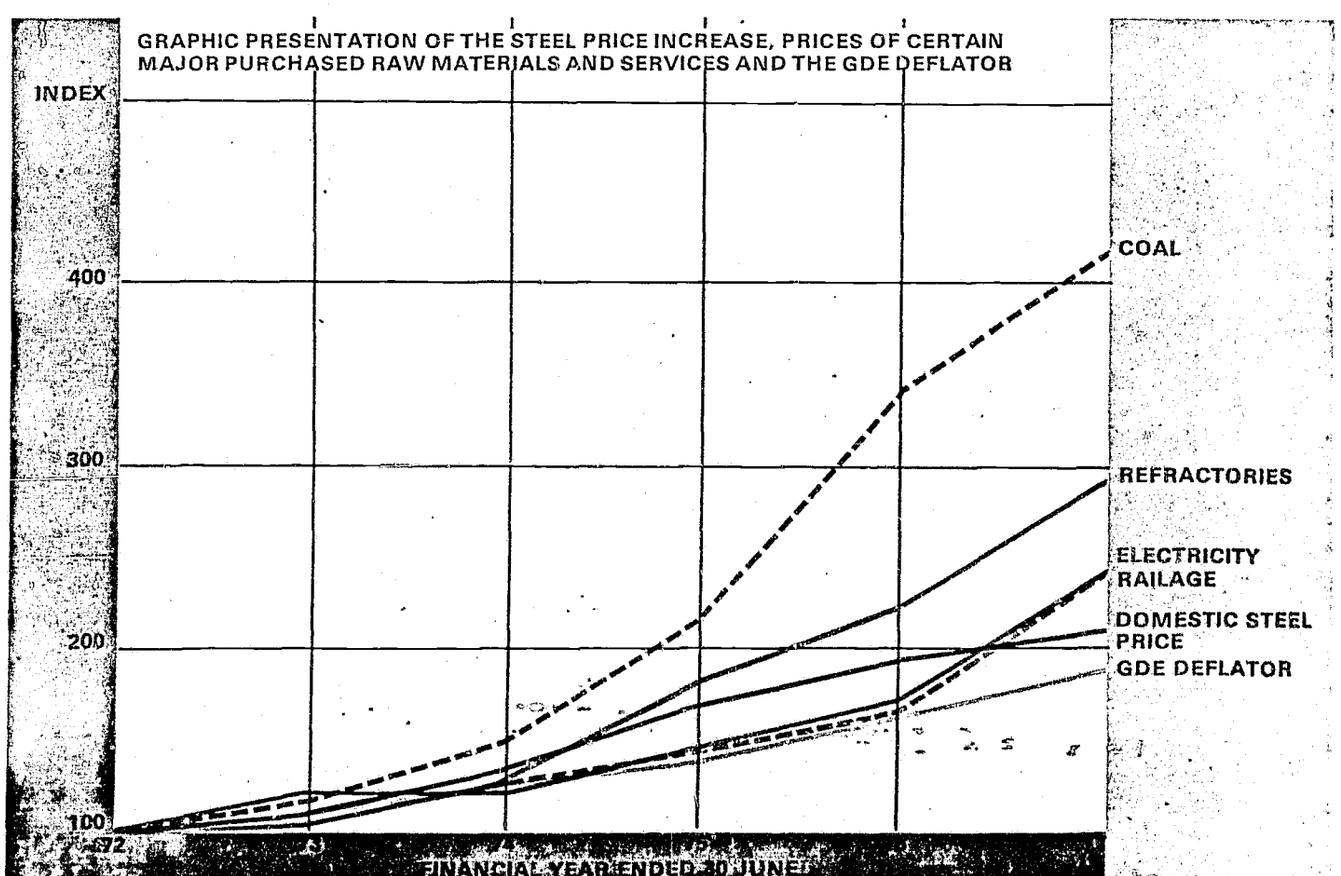
Mr. W. Schlange, sales manager, and also the person with the longest service with Wispeco in South West Africa.

'N SUKSESVOLLE onderneming vir die vervaardiging van deure, vensterrame en ander staalprodukte is deur mnr. H. Kloot, bestuurder en mede-direkteur van Wispeco (SWA) (Edms) Bpk, in Windhoek opgebou. „Met sulke bekwame manne om jou met raad en daad by te staan, het dit darem nie te moeilik gegaan nie," verklaar mnr. Kloot. Een van die „bekwame manne" na wie hy verwys, is die verkoopsbestuurder, mnr. W. Schlange, wat al 27 jaar in Windhoek woonagtig is. Hy het in 1957 daar aangesluit by die firma Asbest-Cement, wat toe as agent vir Wispeco, van Johannesburg, opgetree het. Die ander persoon is die fabrieksbestuurder, mnr. J. J. Pretorius. Hy is geen nuweling by die vervaardiging van vensterrame nie want hy was voorheen by 'n soortgelyke onderneming werksaam.

Major projects completed

The following major projects were completed and commissioned at Iscor centres during the financial year:

- At the Pretoria Works, step 1 of heavy mill No. 2, including finishing facilities, with a capacity of 32 000 finished tons per month, at R64,5 million.
- At the Vanderbijlpark Works, two continuous slab-casting machines, with a joint capacity of 125 000 tons per month, at R52 million.
  A double edge cutter for the 32 mm shearing line, with a capacity of 45 000 tons a year, at R5,5 million.
  A fourth galvanizing line, with a capacity of 25 500 tons per month, at R17 million.
  A continuous painting and laminating plant, with a capacity of 9 000 finished tons per month, at R7 million.
  (A coke oven battery, with a capacity of 1 100 tons per day, at R11 million, was completed but, owing to the damping programme, was "mothballed".)
- At the Newcastle Works, the last 100 of 200 coke ovens, with a capacity of 3 850 tons per day, at R44 million.
  A new blast furnace, with blower and gas-cleaning equipment, with a capacity of 3 200 tons per day, at R52,4 million.
  A sinter plant (with blending plant), with a capacity of 6 100 tons per day, at R33,5 million.
  A continuous slab-casting machine, with a capacity of 60 000 tons per month, at R23 million.
  A billet inspection plant, at R5 million.
- At the Sishen iron ore mine, six drilling machines, with a drill diameter of 250 mm, at R4,5 million.
  Six power shovels, four with a capacity of 15,3 m^3 and two of 11,5 m^3 each, at R12,7 million.
  Seventeen trucks, eleven with a capacity of 150 tons and six of 90 tons each, at R8,9 million.
  The second phase of the ore-handling plant, with a capacity of 9 million tons a year, at R24,5 million. (Total capacity of first and second phases: 18 million tons a year.)
  Workshops and fuel storage and distribution facilities, at R8,5 million.



THE FOUR COST ITEMS SHOWN ABOVE, AT PRESENT REPRESENT APPROXIMATELY 30 PER CENT OF THE TOTAL PRODUCTION COST OF STEEL

particularly at the Vanderbijlpark and Newcastle Works. In other words, by the addition mainly of metallurgical production facilities, the potential reserve capacity of the mills may be fully utilized. In this way, the present production capacity may be raised by about 50 per cent to approximately 8,5 million tons of finished steel at a relatively low capital investment per additional ton of production capacity.

PROCESS IMPROVEMENT

During the financial year it had been possible to improve the plants at the Pretoria coke ovens for the drying and preheating of coal, prior to coking, to such an extent that full-scale blast furnace trials could be conducted with the improved coke.

Production-scale trials are being conducted at the Newcastle Works with the briquetting of coal, prior to coking, in the existing cell furnaces. This is a technique-in-being, aimed at producing good coke with a percentage of poor coking coal.

In the new heavy mill of the Pretoria Works, the universal rolling of rails was conducted on a trial basis. It is a system used by Sacilor in France and Nippon Steel in Japan, and Iscor's trials are conducted under licence from these two undertakings.

MINING

In the mining field, the financial year under review was characterized in particular by two important developments. First, the extensions at the Sishen iron ore mine have reached such a stage of increased production that Iscor's own ore requirements could be supplied and provision made for bulk exports. Secondly, a breakthrough was made with the discovery of three promising deposits of straight coking coal in the northern Transvaal.

Iron ore dispatches from Sishen amounted to 13,8 million tons and from the Thabazimbi mine to 2 million tons. The Durnacol coal mine supplied 1,2 million tons of straight coking coal to the works. This represents 19,9 per cent of the Corporation's metallurgical coal requirements.

At Grootegeluk, where a mine is being developed for the supply of blend coking coal, progress was made, although activities were intentionally delayed as a result of the Corporation's curtailment programme.

The Uis tin mine produced 1 247 tons of tin concentrate, with a tin metal content of 63,7 per cent. It met 40 per cent of the Corporation's needs, whilst the remainder was purchased. The Rosh Pinah zinc mine dispatched 40 281 tons of zinc concentrate, with a zinc metal content of 48,4 per cent, for processing to the works of the Zinc Corporation of SA Limited (Zincor) near Springs. In addition, 11 876 tons of lead concentrate, with a lead content of 45 per cent, were produced and sold.

The extensions at the Glen Douglas dolomite quarry were completed during the year. This quarry, together with the Mooiplaas quarry, supplied 1,3 million tons of dolomite to the works.

PERSONNEL

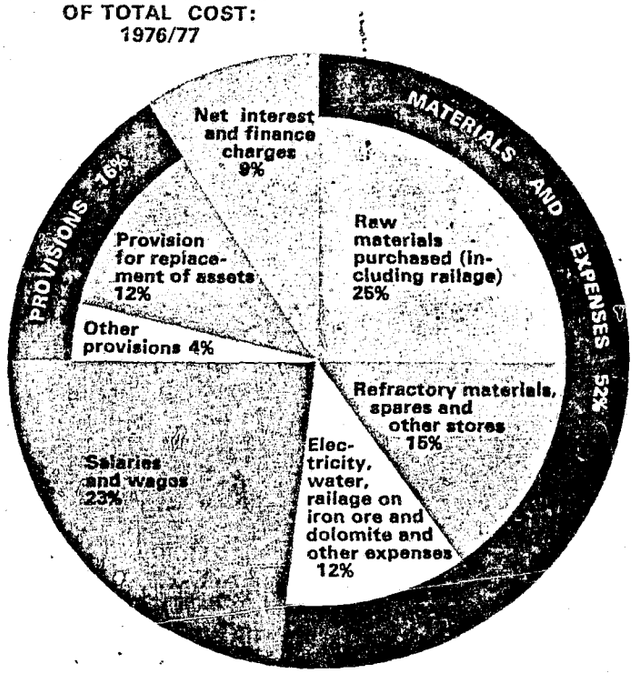
The salary and wage expenditure amounted to R278,4 million, compared to R239,8 million in the previous year.

Despite an increased supply of labour, mainly as a result of the subdued economy, serious shortages continue to be experienced, particularly as far as skilled labour, such as artisans and operators, is concerned.

The utilization of female labour in traditional male posts, mainly at the Vanderbijlpark and Pretoria Works, is still proving successful. At present 930 women are employed in production worker posts previously classified as male posts.

This year Iscor has 275 university bursary holders, of whom 55 are new recipients. At the end of the financial year approximately 3 300 apprentices were employed at the various training centres of the Corporation. In total, Iscor trains about one out of every three of the 11 500 apprentices in the entire engineering industry in the country.

PERCENTAGE DISTRIBUTION OF TOTAL COST: 1976/77


MATERIALS AND EXPENSES 52%
Raw materials purchased (including railage) 25%
Refractory materials, spares and other stores 15%
Electricity, water, railage on iron ore and dolomite and other expenses 12%
Salaries and wages 23%
PROVISIONS 16%
Net interest and finance charges 9%
Provision for replacement of assets 12%
Other provisions 4%

KORTLIKS

VIR DIE eerste keer sedert die aanvang van produksie in 1934 het Yskor se omset R1 000-miljoen in 'n enkele jaar oorskry. Dit blyk uit die verklaring aan aandeelhouers deur die Voorsitter, dr. T. F. Muller, ten opsigte van die boekjaar geëindig 30 Junie 1977.

Die omset geduronde die oorsigjaar het op R1 003 239 000 te staan gekom, vergeleke met R799 005 000 die vorige jaar. Hoë finansieringskoste (R103,9-miljoen), die uitwerking van inflasie, 'n lae tuisvraag na staalprodukte as gevolg van resessionêre toestande en nog ander nadelige faktore het egter daartoe gelei dat die Korporasie 'n netto verlies van R49 089 000 vir die jaar getoon het.

Nieteenstaande onderbenutting van beskikbare kapasiteit, het die produksie van vloeistaal 'n nuwe jaarrekord van 5 810 221 ton bahaal, wat 501 833 ton meer is as die syfer vir die vorige jaar. Die bruikbare produksie van gietblokke en gestringgiete plat- en voorblokke het in totaal op 5 654 822 ton te staan gekom.

year. The usable production of ingots, in the conventional ingot mould, and blooms and slabs, by means of the more recent continuous casting process, amounted to 4 486 992 and 1 167 830 tons, respectively.

STEEL MARKETING

Sales revenue

The turnover for the year totalled R1 003 239 000, which resulted in a net sales value of R917 554 000, as compared with R766 456 000 in the previous financial year. This represents an increase of 19,7 per cent. The 3 788 249 tons of prime steel products sold, and their value, f.o.r. works (excluding export levy), of R824 493 962, show increases of 5,6 and 13,9 per cent, respectively, in comparison with the previous year.

Domestic steel supply

During the year an estimated total of 3 478 000 tons of rolled, drawn and forged steel products from South African and overseas sources was supplied to consumers in the local market. This is a decrease of 1 079 200 tons, or 23,7 per cent, as compared with the adjusted total of 4 557 200 tons supplied during the previous year.

Of the 3 478 000 tons, Iscor supplied 2 633 700 tons or 75,7 per cent and other South African producers 776 300 tons or 22,3 per cent, whilst 68 000 tons or 2,0 per cent was imported. The comparative adjusted percentages for the previous year are 71,3, 22,7 and 6,0, respectively.

Of the tonnage obtained from South African sources, the Corporation supplied 77,2 per cent and other steel producers jointly 22,8 per cent, as compared with 75,9 and 24,1 per cent, respectively, in the previous financial year.

Price increase

The price increase by an average of 8,8 per cent, or R20,23 per ton net, in the official price of South African manufactured primary steel products, which became effective on 3 December 1976, was applied selectively to the various product groups by percentages ranging from 5 to 12,5.

Demand

The domestic demand for steel does not follow an even course. The economic boom conditions which started to build up from 1973 onwards and lasted until 1975, resulted in the demand for steel rapidly recovering from the 1972 trough. Since then there was a steep increase in demand up to 1975, followed by a sharp drop.

Despite the above trends, Iscor's tonnage of dispatches to the local market dropped by only 7,5 per cent from 1975 to 1976, as compared with a decline of 22 per cent experienced in the total national demand.

Electric sheet

After Iscor had discontinued, for economic reasons, the production of electric sheet for the manufacture of electric motors during 1969, the local industry was totally dependent on imports of this product.

Since this is regarded as a strategic product, however, its production was resumed on an experimental basis during the financial year. It is estimated that this product will meet approximately 75 per cent of the local requirements.

Berlin warehouse

The warehouse erected by Iscor on the instructions of the Government at Berlin, near East London, was commissioned at the end of January 1977.

Steel exports

In order to achieve the maximum utilization of the Corporation's production units, 1 089 000 tons of miscellaneous steel products were exported during the financial year.

Iron ore exports

Ore exports through Port Elizabeth were continued until the harbour facilities at Saldanha Bay were commissioned on 24 September 1976. During the financial year, 6 886 000 tons (wet basis) of ore, with an estimated f.o.b. invoice value of R90 152 000, were shipped, of which 6 738 000 tons were exported through Saldanha Bay. Dispatches are effected mainly in terms of contracts for periods ranging from 7 to 12 years.

Alienation of the Sishen-Saldanha railway line and harbour

In consequence of the mining development in the northern and north-western Cape Province, several ore exporters intimated that they also wished to avail themselves of the railway and harbour facilities to effect bulk ore exports to their overseas customers. This would have made Iscor a public carrier and was therefore the main reason why the Sishen-Saldanha railway line and the harbour were transferred to the South African Railways.

The transfer should in no way lead to an increase in the transport and harbour tariffs. The tariffs are based on a formula and are not subject to normal SAR tariff increases.

DAMPING MEASURES AND EXPANSION

As a result of the poor international and local economic conditions, the Corporation was obliged to curtail drastically even further the envisaged extensions in respect of its iron and steel manufacture.

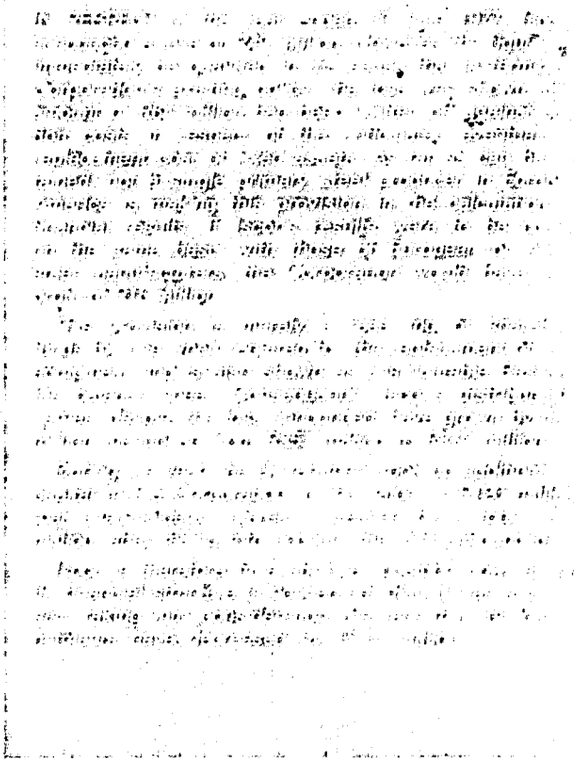
The curtailment and consolidation programme being followed at present, involves the limiting of capital expenditure to a minimum. For the time being, only the completion of certain current projects to which Iscor is already committed is being proceeded with.

Since the Corporation is now not able to embark on any new major extensions, and since it takes years to commission plant, steel shortages which will inevitably have to be made up by imports at high cost, may again occur after recovery of the domestic market.

A positive aspect is that a large part of Iscor's overall present capacity was acquired during the past six years and that this equipment is therefore of the most modern in comparison with facilities elsewhere in the world.

Moreover, there is the potential for rounding off,

FINANCIAL STRUCTURE STRONGER



The drop in trading profit compared with the previous year was due essentially to the effect of the high rate of inflation on the Corporation's cost structure and the adverse effect of recessionary conditions in South Africa which was reflected by a low domestic demand for steel products. This low demand forced Iscor to increase its export sales but at prices lower than domestic prices.

After taking into account the many adverse factors, the overall net loss for the financial year, after charging financing costs of R103 928 000 (1975/76: R87 657 000) and reserve for increased replacement cost of fixed assets of R64 200 000 (1975/76: R49 495 000), amounted to R49 089 000 (1975/76: R30 057 000).

BALANCE SHEET AND FINANCING PROGRAMME

The Sishen-Saldanha scheme was sold to the South African Railways Administration with effect from 1 April 1977. The transaction involved the take-over of fixed assets to the value of approximately R528 million, together with other sundry current assets and liabilities. In partial settlement of this, loans to the value of approximately R439 million were transferred.

Owing to the present economic conditions, capital expenditure for the year, mostly on rounding-off operations, was reduced to R295 million, compared with R63[illegible] million for the previous year. During the year the Government contributed further share capital to an amount of R120 million.

After the end of the financial year, Iscor received offers from various parties, independently of one another for its 10 685 612 shares in SA Manganese Amcor Limited (Samancor). The matter was referred to the Government which, after due consideration of all the relevant factors, requested the Corporation not to accept any of the offers and to maintain its present shareholding in Samancor. Each of these offers was for amounts several times the book value of the shares and would consequently, if accepted, have brought Iscor a considerable capital profit.

COST REDUCTION AND PRODUCTIVITY IMPROVEMENT

Considerable success was achieved during the year with the cost reduction effort, but unfortunately it was counteracted by the sustained increases in the unit cost of production factors.

The increases in rail tariffs on 1 September 1976 and 1 April 1977, together with the increases in electricity tariffs on 1 September 1976 and 1 January 1977, as well as the increases in the prices of coking coal and refractories since July 1976, have added in total about R16 per ton to the cost of saleable steel. If these increases are calculated on a year basis at the present rate of production, their sum amounts to approximately R75 million. (It was already announced in September this year that Escom's electricity tariffs would be further adjusted on 1 January 1978. The tariff increases concerned will mean a further rise in cost for Iscor of about R600 000 a month.)

Labour productivity improved considerably compared with the previous year. This improvement represents a continuation of the trend maintained during previous years. In addition, throughput yields at the Vanderbijlpark and Newcastle Works increased, mainly as a result of the commissioning of modern continuous casting machines.

IRON AND STEEL PRODUCTION

Total blast furnace production amounted to 5 118 457 tons, as compared with 4 542 546 tons in the previous year. To this total the Vanderbijlpark, Pretoria and Newcastle Works contributed 2 344 887, 1 390 630 and 1 318 295 tons of liquid iron, respectively, whilst 64 645 tons of liquid ferro-manganese were produced by the Newcastle Works.

The joint liquid iron production used for pig iron and the production of steel, shows an increase of 574 08[illegible] tons over the comparative figure for the previous year. The production of ferro-manganese amounted to 56 87[illegible] tons, as against 55 988 tons last year.

Liquid steel production totalled 5 810 221 tons, which is 501 833 tons higher than the figure for the previous

domestic production, considerable process stocks had already accumulated at the three works at the beginning of the financial year and the Corporation was forced to curtail its iron and steel production for the time being. Steel exports for the 1977 calendar year are nevertheless expected to amount to about 1,5 million tons, but it must be borne in mind that prices in overseas countries are relatively low as a result of keen international competition.

It is nevertheless still more advantageous to export steel at lower prices rather than withdraw expensive equipment from production and retrench skilled employees. In this manner, both variable and part of fixed costs are recovered, whilst valuable foreign currency is earned.

FINANCIAL RESULTS

Iscor's accounting policies, laid down when it commenced operations in 1934, were subjected to an in-depth study by an eminent outside consultant during 1952. The whole approach was one of conservatism, and during a period when inflation was hardly a consideration, Iscor took the lead in South Africa by making provision, as a charge against production costs, for the eventual higher costs of replacing its production units.

Iscor considers this provision more important than ever before, and in the 1976/77 financial year alone an amount of R64,2 million (1975/76: R49,5 million) was treated as a legitimate cost factor before the financial results for the year were arrived at. Since the commencement of the practice up to the end of the financial year an amount of R329,8 million had in this way been provided as a charge against production costs for future replacement.

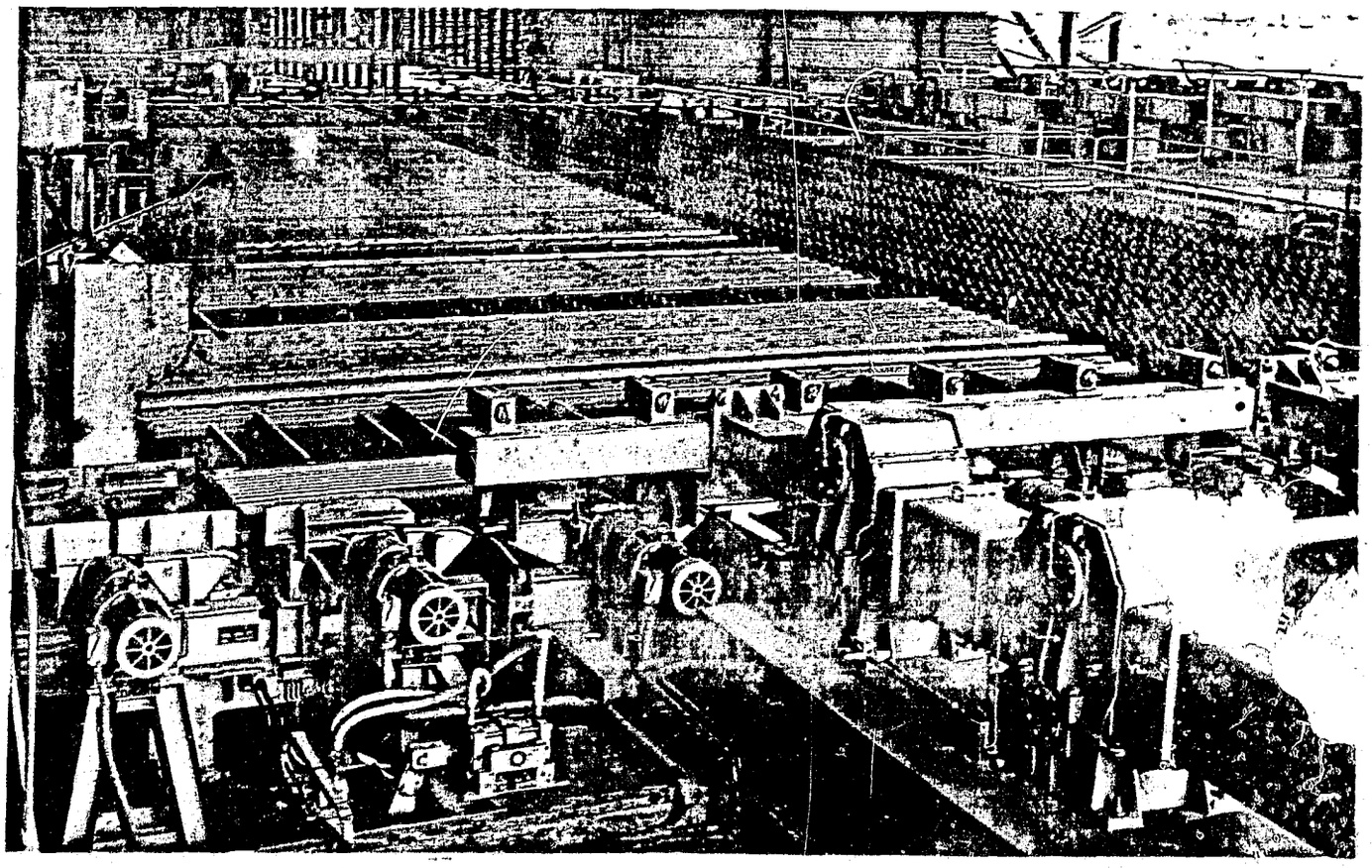
This provision, like other conservative accounting practices, has at times been lost sight of when comparing Iscor's results with those of other companies.

The financial results for the year under review, set out below, incorporate the effect of the accounting policy changes made. The net income from trading of R44 707 000 is arrived at after charging the above R64,2 million for increased replacement cost of fixed assets.

	1976/77 R000	1975/76 R000
Turnover	1 003 239	799 005
Net income from trading	44 707	51 342
Dividends received	10 132	7 768
Profit on sale of investments	—	117
	54 839	59 227
Provision for writing down an investment	—	(1 627)
Financing charges	(103 928)	(87 657)
Net loss for year	(49 089)	(30 057)

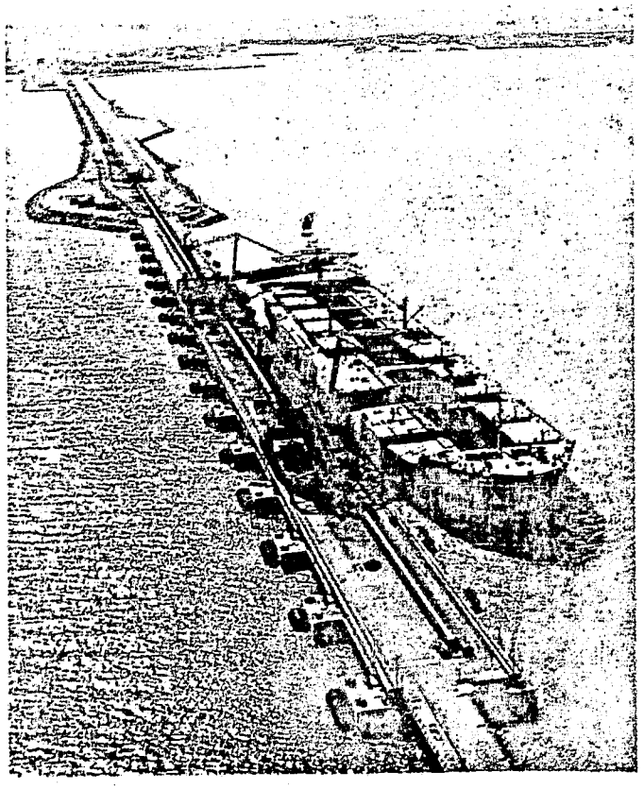
The cooling bed at the finishing end of the billet mill in the Newcastle Works.

Die afkoelbed by die voltooiingskant van die knuppelwalsery in die Newcastle-werke.



Turnover exceeds R1 000 million

For the first time since it started production in 1934, the Corporation's turnover exceeded R1 000 million in one year. This is evident from the statement to shareholders by the Chairman, Dr. T. F. Muller, for the financial year ended 30 June 1977, forming part of the annual report released this month. During the same period Iscor attained the highest ever production figure of 5 810 000 tons of liquid steel. The following are extracts from the statement:



Sishen iron ore being loaded into a giant carrier at the Saldanha Bay terminal.

Sishen-ystererts word by die Saldanhabaaise eindpunt in 'n reuse-vragskip gelaai.

SINCE 1974 the free world has been struggling to surmount the protracted and severe economic recession.

Against this background, the steel industry in Western countries and Japan is passing through difficult straits. In a few cases only 60 per cent of capacity is utilized, as compared with Iscor's 80 per cent at the end of the financial year. In an effort to achieve greater capacity utilization, many countries are exporting to foreign markets at particularly low prices, in some instances at only just above variable cost.

The local steel industry has also been caught in the downward economic cycle, the end of which is not yet in sight. In view of the fact that steel is sold at controlled prices within the Republic, it is a prerequisite for Iscor that the existing capacity be fully utilized and that about 90 per cent of the steel produced be sold locally at current prices if the Corporation is to operate profitably. However, the present economic climate makes this impossible.

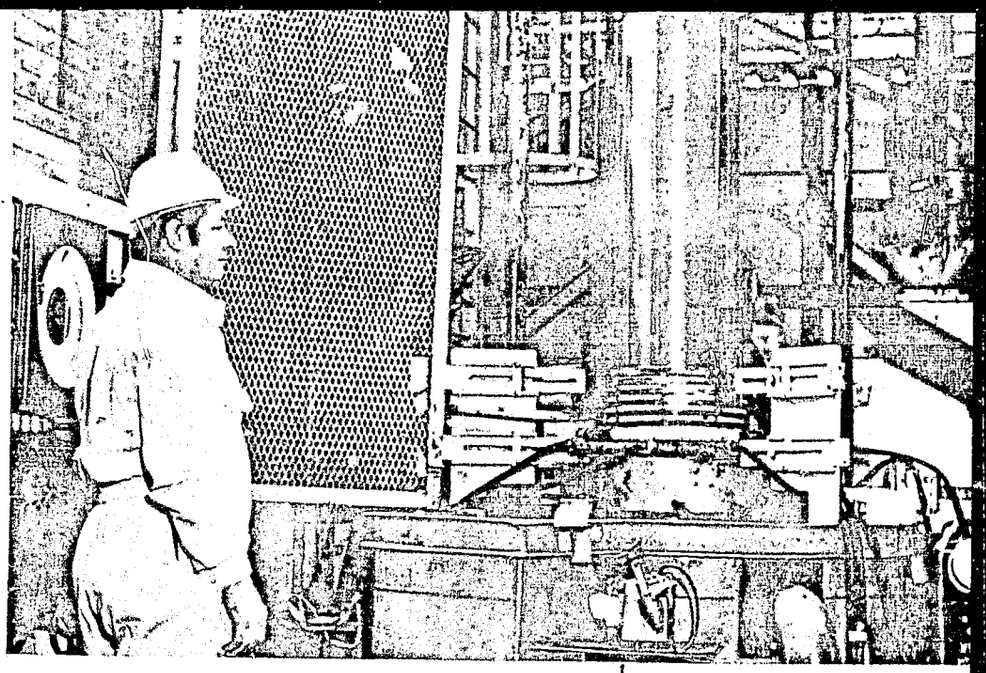
As mentioned in previous annual reports, the Corporation some years ago undertook major extensions at its works and mines. This was done in accordance with the projected domestic long-term demand at the time, to enable it to meet, as far as possible, the expected rise in the domestic demand for its steel products. However, the commissioning of the latest production units — a process requiring an average of five years from the date the decision is taken to expand — coincided with an unprecedented trough in the domestic cyclical phase and the resultant drop in the local demand for steel.

Since the export market for primary steel products has lately not been capable of fully absorbing the surplus

BRIEFLY

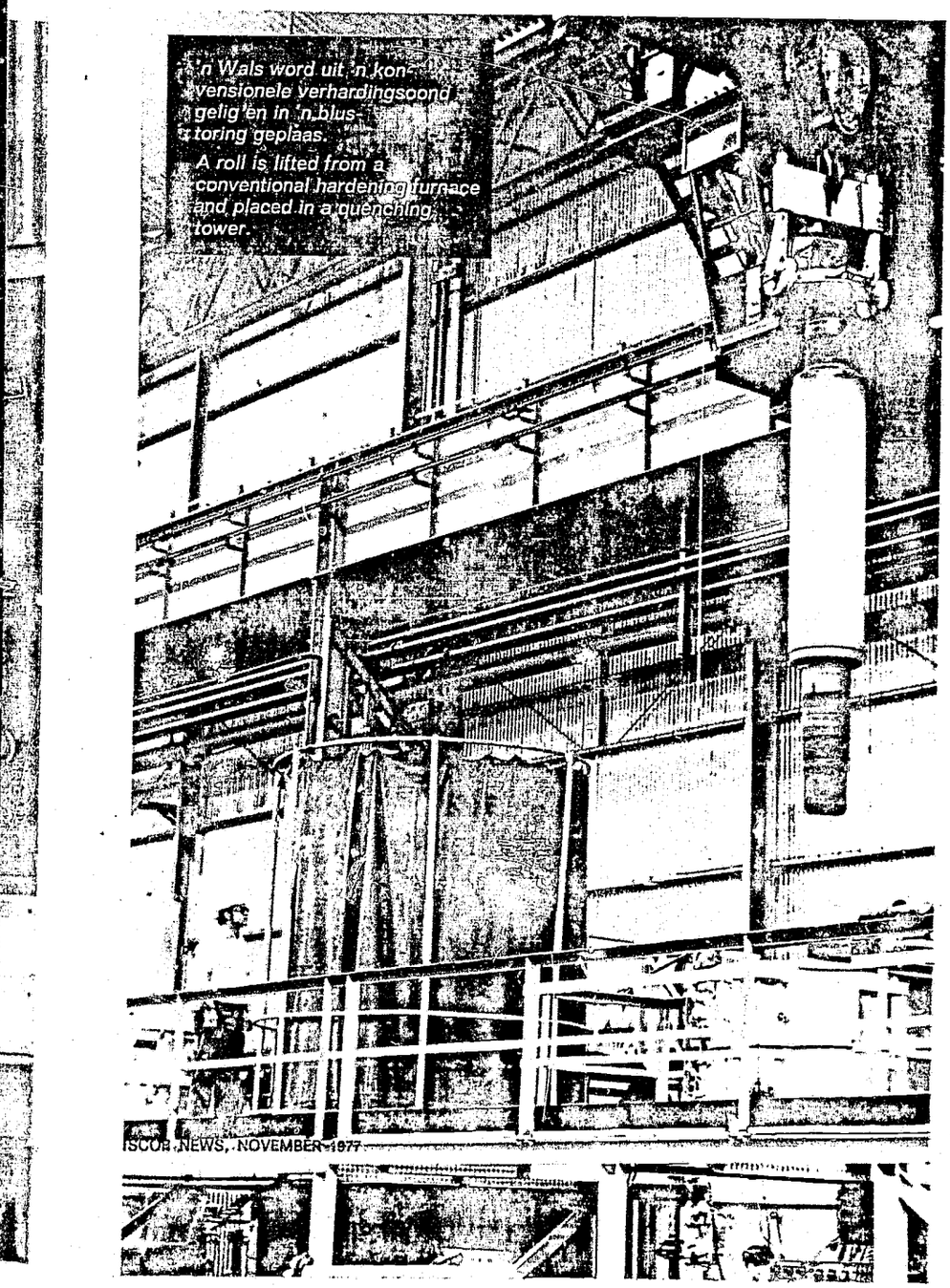
A SUBSTANTIAL and increasing saving is achieved at Iscor's Vanderbijlpark Works by remaking scrap rolls into smaller rolls for use in other mills. During the past financial year, from July 1976 to June 1977, the remanufacture of 147 rolls resulted in a saving of about R693 000, and it is expected that the figure will exceed R1 million during the current financial year.

The Roll and Shearblade Services section has modern facilities at its disposal for the remanufacture of rolls, which has become standard practice at this works. The facilities consist of conventional and induction roll-hardening plants and equipment for ultrasonic testing and machining. Scrap shearblades are also remade.



Induksie-verharding van 'n wals. Tydens die proses word die veiligheidskerm toegemaak.

Induction hardening of a roll. The safety screen is closed during the process.

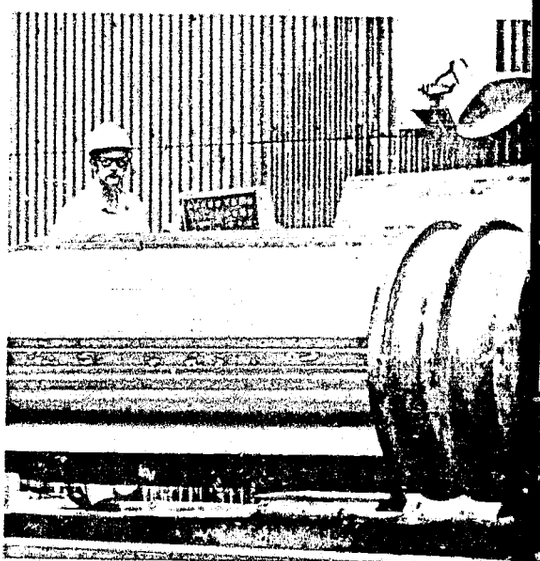


'n Wals word uit 'n konvensionele verhardingsoond gelig en in 'n blustoring geplaas.

A roll is lifted from a conventional hardening furnace and placed in a quenching tower.

'n Skrotwals (afkomstig van die platblokwalsery) wat hervervaardig word tot 'n skaalbrekerwals, word gemasjineer.

Machining a scrap roll (from the slabbing mill) which is being remanufactured into a scale-breaker roll.



New way to inspan the wind

A close-up of the steel disc turning the rubber wheel.

'n Naby-opname van die staalskyf wat die rubberwiel laat draai.

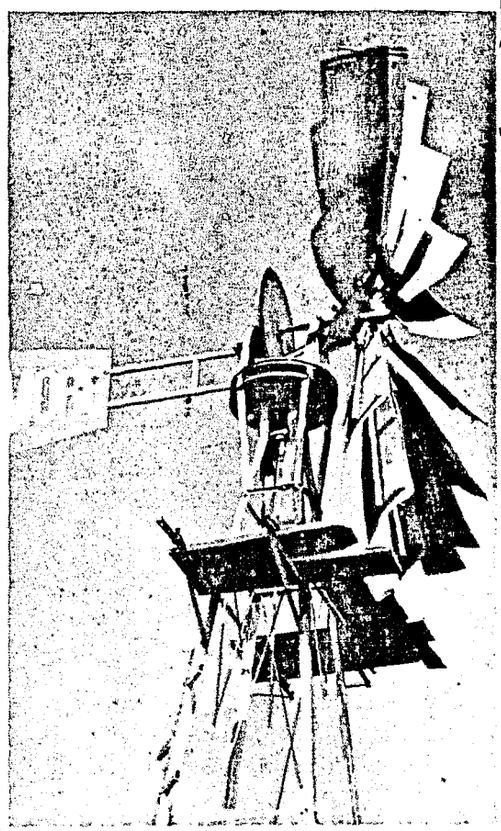
A NEW METHOD of using windmill power has been patented by a South African company, Monomore (Pty) Ltd, of Heidelberg (Transvaal), which claims that the innovation places it in a world-wide leading position in this field. The method is said to yield ten times more water compared with conventional windmill operation in equal wind conditions, and the windmill can generate electric power at the same time. Although it responds to the slightest wind, provision is made for connecting it to any motor or the power take-off of a tractor, if necessary.

This innovation, described by a spokesman for the company as the first major improvement in windmill technique for many years, is of special significance in the present energy crisis, which motivated its invention. The new method also brings new life to the use of the windmill at a time when it was thought to be on the way out..

When the company exhibited its windmill for the first time this year at the Bloemfontein and Rand Shows, after about four years of development, it stirred up great interest amongst individuals as well as suppliers of windmills, locally and overseas. Ten local distributors have been appointed, whilst export orders are being negotiated, with keen interest being shown in the USA, United Kingdom, South American countries and Australia.

With the new technique the old method of moving the rod up and down has been abandoned. Instead, an axle is rotated to operate a Mono pump in the borehole. The pump employs a spiral action to draw the water and thus causes it to be delivered under pressure.

The rotation of the windmill fan



is converted to rotate the axle by means of friction between a 750 mm diameter steel disc fixed to the fan and a rubber wheel of 100 mm in diameter at the top of the axle, the rubber wheel running against the disc. By adjusting the rubber wheel higher or lower against the disc, the driving ratio can be changed from 1 : 1 up to 1 : 7.

A short distance above the ground a pulley is fixed to the axle which can be used for electric power generation. The axle can also be disconnected and a pulley used for the pump to be driven by belt from a tractor or motor.

The components for the windmill are manufactured mainly from

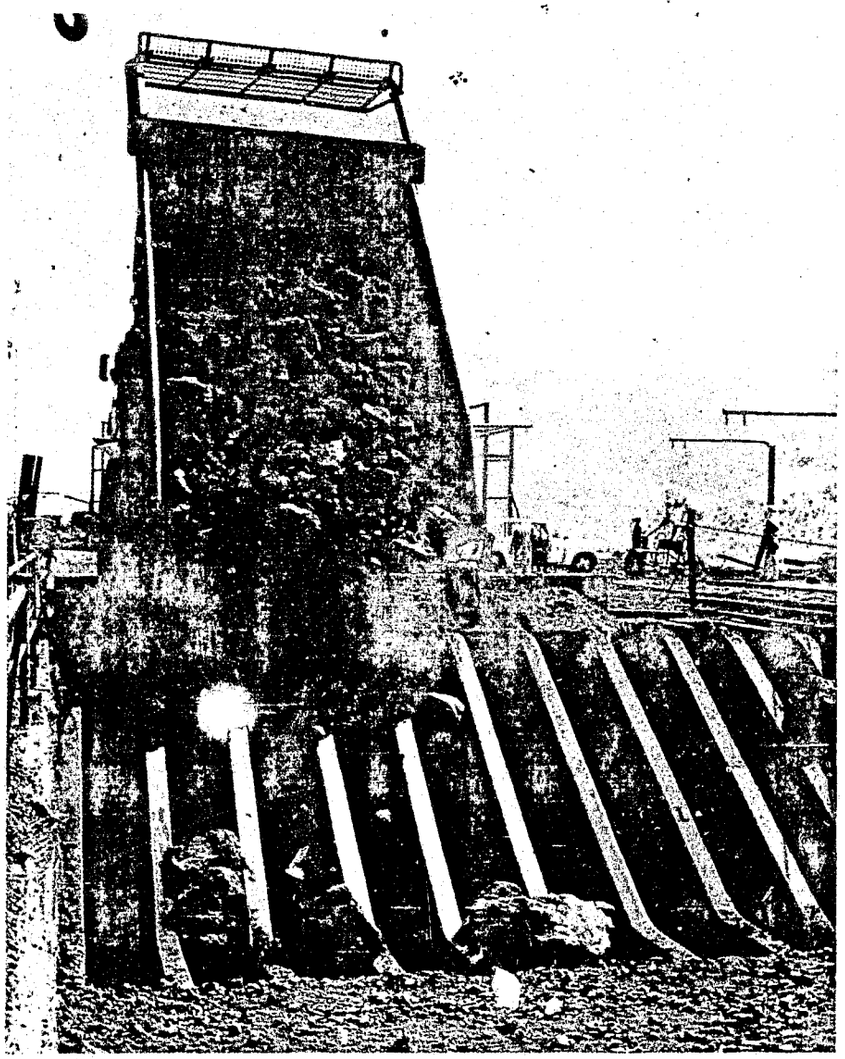
Produksie vlot in Ysterberg

BRIEFLY

OPEN-CAST mining of iron ore at Iscor's Thabazimbi mine is at present in full swing in the Donkerpoort mountain. To maintain the ore production rate of about 4 000 to 5 000 tons per day, approximately 30 000 tons of overburden has to be stripped daily.

The most important item of new equipment at Donkerpoort is an underground primary crusher, installed at a cost of approximately R1,9 million. Maintenance of the crusher, which has an effective heating and cooling system, is carried out mainly underground. Two pan feeders, adjustable to capacities of approximately 800 tons per hour each, feed the crusher. Iron ore is transported to the stack by means of a 520 m long conveyor belt.

A third ore pass, reaching from the pit's 120 m level to the 205 m level, was recently completed.



Erts word deur die rooster van Donkerpoort se noordelike geut gestort.

Ore being tipped through the grill of Donkerpoort's northern pass.

DIE ONTGINNING van ystererts deur middel van die oopgroefmynboumetode by Yskor se Thabazimbi-myn is tans vol op dreef in die Donkerpoort-berg (kyk YSKORNUUS, Oktober 1977). Sowat 4 000 tot 5 000 ton erts word daagliks uit hierdie bron ontgin, waarvoor 30 000 ton afval per dag gestroop word. Die produksiemikpunt van 43 000 ton per week sal weldra bereik word.

Alle bogrondse toerusting, bestaande uit agt boormasjiene, vier vooremmerlaaiers, drie laaigrawe, drie stootskrapers 12 vragwaens, word ten volle gewend.

Die huidige Donkerpoort-groef is 1 500 m lank en 300 m breed. Wanneer dit volgens vooruitskatting teen 1999 uitgewerk sal wees, sal dit slegs 30 m breed wees.

Die groefsye loop na benede in die vorm van reuse-trappe wat elk 15 m diep is. Die 45-m-vlak is reeds uitgewerk en tans geskied ontginning vanaf die 60-m-vlak na dié van 105 m. Wanneer Donkerpoort uitgewerk is, sal die groef uit 22 vlakke bestaan.

'n Belangrike deel van die Donkerpoort-projek was die ondergrondse installering van 'n primêre wentelvergruiser, teen 'n koste van nagenoeg R1,9-miljoen (kyk YSKORNUUS, September 1976), wat in nege maande voltooi is. In die proses is sowat 50 000 ton rots uitgegrawe en ongeveer 3 000 m^3 beton en 300 ton wapeningstaal gebruik. Die vergruiserkamer is 27 m hoog en het 'n deursnee van 37 m.

Die vergruiser beskik oor twee ringe en mantels wat albei slytplate het. Terwyl een ring en mantel in gebruik is, word die hulpeenheid van sy slytplaat voorsien. Omdat laasgenoemde met sink vasgegiet word, is 'n smeltoond in die vergruiserkamer geïnstalleer. Die oond vergemaklik instandhouding, aangesien dit verhoed dat die hulpmantel en -ring, wat 'n aansienlike massa het, na buite geneem en weer teruggebring moet word.

Gedurende instandhoudingstilstande en naweke koel die vergruiser se olie in so 'n mate af dat die viskositeit daarvan heelwat toeneem. Wanneer die vergruiser daarna weer in werking gestel word, is dit dus nodig om die olie tot 'n geskikte temperatuur te verhit. Vir hierdie doel beskik die ver-

conveyed to and processed in Wemco drum washers, while fine coal (19 x 0 mm) is treated in cyclone washers. From the Wemco first stage separation and the cyclone first stage, coking coal is produced. These products, together with filter cake, all with an ash content of 10 per cent, are stored in bunkers. During offshifts the coking coal is transferred by conveyor to the siding bunker, from which it is loaded into SAR trucks and transported to the Newcastle Iscor Works.

The Wemco and cyclone second stage products are power station fuel, and this is combined with the Chance plant washed product, which is transported 2,5 km to the power station staithes via a system of conveyor belts. The discard products are stored in two 400 ton silos and loaded into lorries for dumping.

Quality is controlled by laboratories at Kilbarchan. Continuous sampling is carried out 20 hours a day while the plants are operational, to ensure that standard qualities are maintained.

To develop Roy Point, the Corporation allocated R7 million for the coal preparation plant, R2,4 million for underground development, R2 million for surface coal transport facilities, R2 million for buildings and R2,6 million for services and other expenditure — a total investment of R16 million.

Kortliks

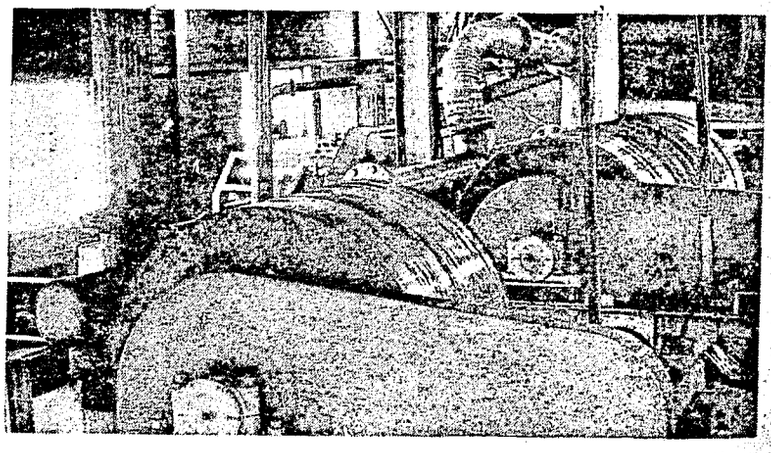
DIE VOLLEDIGE ingebruikneming van die Roy Point-seksie by die Kilbarchan-steenkoelmyn naby Newcastle in Noord-Natal voeg 'n nuwe bron van mengkooksteenkool by die Korporasie se bestaande leweransiers van hierdie kommoditeit. Die projek om Roy Point te ontwikkel, is van stapel gestuur op die grondslag van 'n drieledige ooreenkoms tussen General Mining & Finance-korporasie Bpk, die Elektrisiteitsvoorsieningskommissie (Evkom) en Yskor.

By Roy Point val die klem op die voordeligste benutting van 'n steenkoolbron in die belang van sowel voorsiener as verbruikers. Terselfdertyd hou die metode wat hier gevolg word in dat Suid-Afrika andermaal die leiding neem in die prosessering van stoomsteenkool in twee produkte vir heeltemal verskillende aanwendings.

Die Korporasie het R16-miljoen in die ontwikkeling van Roy Point belê.

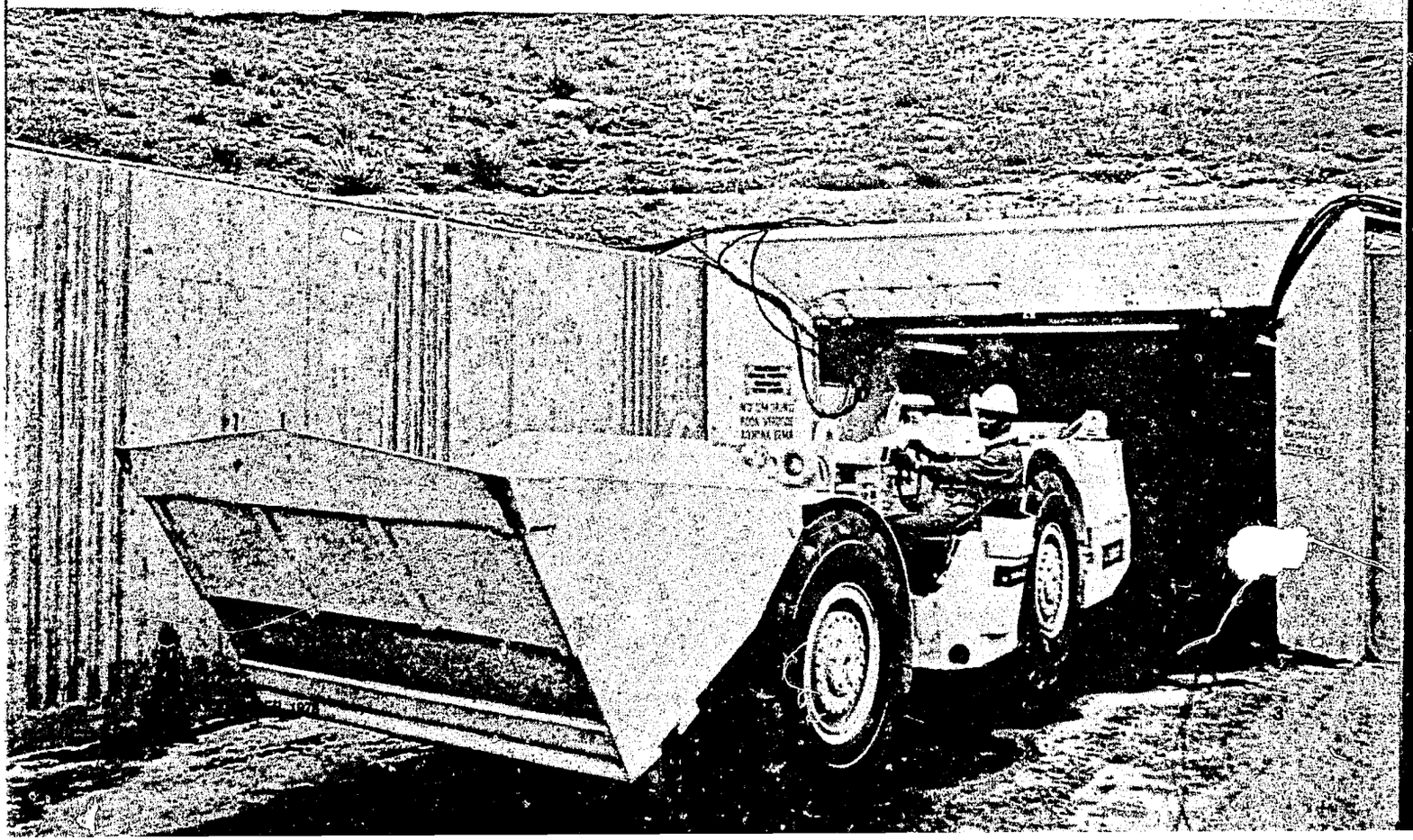
A close-up of drum magnetic separators in the coal preparation plant.

'n Naby-opname van trommelmagnetiese skelers in die steenkool-bereidingsaanleg.



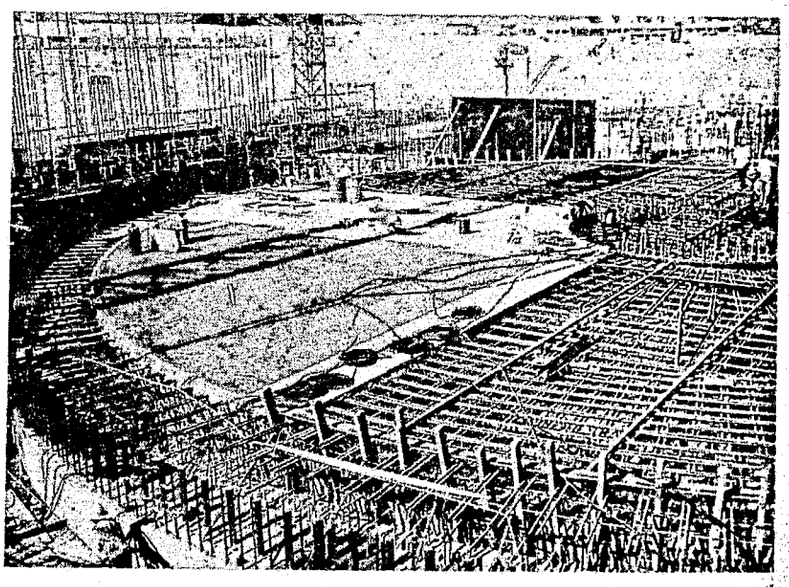
A load-haul dumper at the Roy Point adit mouth.

'n Laaivervoerstortwa by die ingang tot Roy Point se dagtonnel.



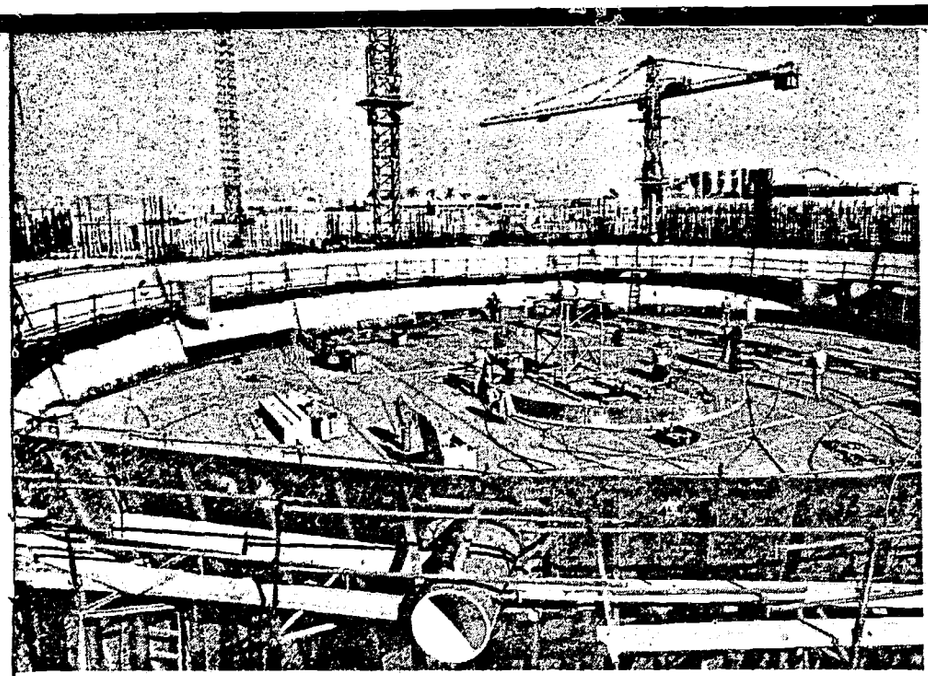
Yskor-wapeningstaal word gelê vir die boonste vlot of vloer van die kerneiland. Hierdie vloer, wat 3 tot 5,5 m dik is, rus op 'n stelsel van aseismiese laers (regs bo) as beskerming teen aardbewings.

Iscor reinforcing steel being laid for the upper raft or floor of the nuclear island. This floor, which is 3 to 5,5 m thick, rests on a system of aseismic bearings (upper right) as a protection against earthquakes.



Staalplaat, 6 mm dik, maak die vloer van die reaktorgebou uit.

Steel plate, 6 mm thick, forms the floor of the reactor building.

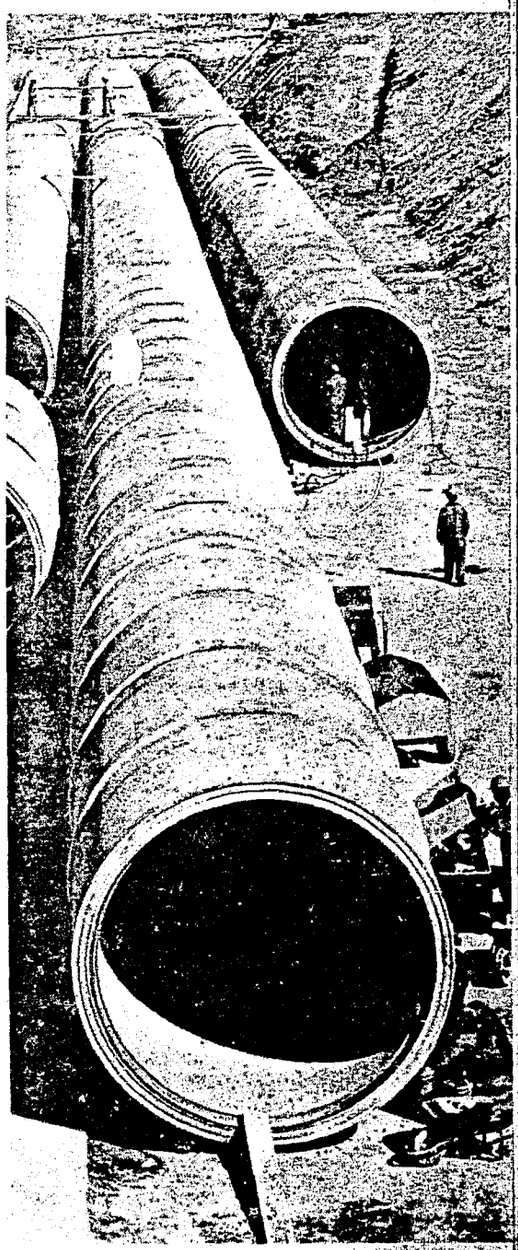


Die staalvoering vir die inperkgebou van reaktor nr. 1 onder konstruksie. Hierdie silindervormige staalstruktuur sal 37 m in deursnee en sowat 60 m hoog wees.

The steel liner of the No. 1 reactor containment building under construction. This cylindrical steel structure will be 37 m in diameter and about 60 m high.

Die koelwaterpype van 3 m in deursnee wat die seewater na die turbine-kondensators sal voer teen 'n totale vloei van 38 m³/sek per eenheid.

The 3 m diameter cooling water pipes which will convey the sea water to the turbine condensers at a total flow of 38 m³/sec per unit.



ENIGE STRUKTUUR wat 45 000 ton wapeningstaal bevat, moet iets buitengewoons wees. En dit is presies wat die Koeberg-kernkragstasie op die weskus ten noorde van Kaapstad sal wees. Tans in aanbou en met die inbedryfstelling van die eerste eenheid beplan vir Desember 1982, en die tweede 'n jaar later, is Koeberg inderdaad uniek en 'n bewys van die vérsiendheid van die Elektrisiteitsvoorsieningskommissie (Evkom).

Volgens vooruitskatting deur Evkom van die Republiek se toekomstige kragbehoeftes sal die elektrisiteitsvraag in die volgende tien jaar verdubbel, teen die jaar 2000 vervyfdubbel en teen 2030 byna 25-voudig toeneem. Waar die vraag in 1977 op sowat 12 700 megawatt te staan gekom het, sal dit ongeveer 24 000 MW in 1987 beloop, 56 300 MW in die jaar 2000 en 298 000 MW in 2030.

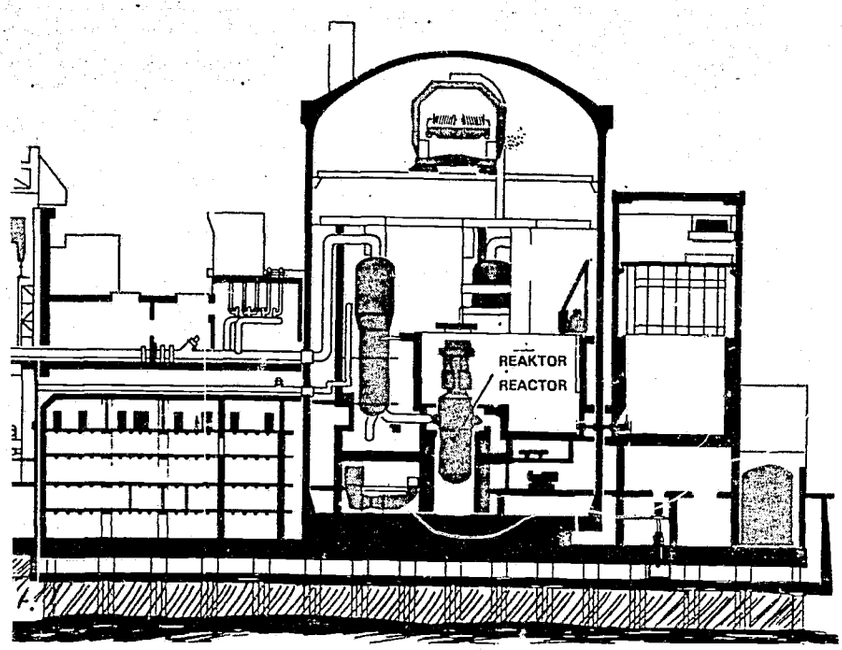
Tot dusver was die opwekking van elektriese krag in Suid-Afrika byna uitsluitlik op konvensionele termiese kragstasies aangewese, met steenkool as die vernaamste hittebron. Hoewel daar volop afsettings stoomsteenkool in die land is, is dit ook waar dat die betekenis van steenkool as uitvoerartikel in die lig van die onsekere olievoorsiening sal toeneem. Bowendien vind die petrochemiese en plastieknywerhede al hoe meer ander gebruike vir steenkool.

In die lig van hierdie feite het Evkom die moontlikheid ondersoek om kernkrag aan te wend. 'n Kernkragstasie verskil van 'n konvensionele deurdat die stoom wat gebruik word om die turbogenerators aan te dryf, nie gevorm word in ketels wat met steenkool of olie verhit word nie, maar met kernenergie. Daar is bereken dat Koeberg „A" tussen vier- en vyfmiljoen ton steenkool per jaar sal bespaar.

Na raming sal Koeberg oor 'n tydperk van 30 jaar sowat 10 000 ton uraandioksied gebruik, teenoor 'n konvensionele kragstasie met dieselfde kapasiteit se verbruik van ongeveer 150-miljoen ton steenkool. Anders gestel, die energie wat deur 1 kg suiwer uraan-235 vrygestel word, is gelyk aan dié van 2 900 ton steenkool. Verder maak die gebruik van seewater vir verkoeling van die kondensators 'n besparing van 65-miljoen liter vars water per dag moontlik.

Evkom het ingevolge die Wet op Kernkrag by die Raad op Atoomkrag aansoek gedoen om 'n lisensie om so 'n kragstasie te bou en te bedryf. Die plaas Duynefontein, noord van Melkbosstrand, is in 1967 gekoop, en die kontrak vir die bou van die Koeberg-kernkragstasie is in Julie 1976 aan die Franse konsortium Framatone, Alsthom, Spie Batignolles en Framateg toegeken.

Waarom dan soveel wapeningstaal? Baie mense glo dat 'n kern-



'n Deursneetekening van 'n kernkragstasie soortgelyk aan dié wat by Koeberg gebou word. Die silindervormige reaktor-inperkgebou is in die middel, met die elektriese/beheerkamergebou links en die brandstofgebou regs.

A sectional drawing of a nuclear power station similar to that being built at Koeberg. The cylindrical reactor containment building is in the centre, with the electrical/control room building on the left and the fuel building on the right.

BRIEFLY

THE NUCLEAR power station now under construction for Escom at Koeberg, north of Cape Town, is of great importance to help meet the country's growing hunger for electric power. It will contain two reactors, the first of which is scheduled to be commissioned in December 1982 and the second a year later.

Because stringent safeguards are required to prevent radio-active fission materials reaching the atmosphere, accident situations are avoided by very careful design, construction, testing and operation. Events such as earthquakes, floods and even aircraft crashes, are considered.

The reactor and associated equipment are housed in the containment building, erected on a special nuclear island. Iscor reinforcing steel — 45 000 tons of it — is used to reinforce the two floors of the island, 2 and 3 to 5,5 m thick, respectively, and a 6 mm thick steel plate lining seals off the containment building, which has a 0,9 m post-tensioned concrete wall.

The contract for the erection of the power station was awarded in 1976 to a French consortium, Framatome, Alsthom, Spie Batignolles and Framateg.

kragstasie niks minder is nie as 'n bom wat ons almal sonder waarskuwing kan uitwis as die skofvoorman dalk per ongeluk die verkeerde knoppie druk. So 'n vrees is ongegrond omdat die uraan wat vir 'n bom gebruik word, byna suiwer uraan-235 moet wees, terwyl die brandstof vir 'n kernreaktor soos dié van Koeberg, nie meer as drie persent uraan-235 bevat nie.

By sowel die ontwerp en konstruksie as die bedryf van 'n kernkragstasie is veiligheid die wagwoord en 'n mag der menigte maatreëls word getref om nie alleen die bedryfspersoneel nie maar ook die omgewing en die publiek teen radioaktiewe stowwe te beskerm. Tydens die konstruksie van Koeberg is dié veiligheid, wat letterlik ingebou word, die indrukwekkendste.

Die doel met die wapeningstaal is om die sogenaamde kerneiland, waar die reaktor- en ander geboue opgerig word, so stewig te maak dat dit bestand sal wees teen moontlike aardbewings, oorstromings en selfs vliegtuie wat neerstort. Die Franse standaardontwerp maak voorsiening vir 'n aardbewing met 'n horisontale versnelling van 0,2 G. Vir Koeberg, waar 'n aardskok met 'n terugkeerfrekwensie van 10^6 'n horisontale versnelling van 0,3 G in die rotsformasies onder die fondamente kan veroorsaak, is daar besluit om die kerneiland op 'n spesiaal ontwerpte skokdempende fondament te bou.

Op die terrein van die kerneiland is die seesand dus tot op die rotslaag verwyder en hierop is 'n sandsement-mengsel van 6 m dik gelê. Daarna het die onderste vloer van gewapende beton, 2 m dik, gevolg. Bo-op hierdie onderste vloer is 'n stelsel van aseismiese laers geplaas, wat elk bestaan uit 'n boonste plaat van vlekvry staal wat kan skuif op 'n onderste brons-lood-laer, vasgeheg aan 'n neopreenblok. Die boonste vloer van gewapende beton, 3 tot 5,5 m dik, rus op hierdie laers en vorm die vloer vir die kerneiland self.

Teen lae aardskuddings sal die vervorming van die neopreen die skok absorbeer, terwyl hoë skuddings die twee vlakke van die laers oor mekaar sal laat skuif.

Op hierdie massiewe vloer word die twee 56-m-hoë reaktor-inperkgeboue tans opgerig. Elke inperkgebou huisves onder andere die reaktor, drie stroomontwikkelaars, primêre pompe en die drukopwekker. Alle interne strukture rus op 'n silindervormige muur binne die inperkdop. Die reaktor word deur 'n biologiese betonskild van 1,8 m dik omring, en die inperkgebou self bestaan uit 'n staalplaatvoering van 6 mm, wat afdigting teen lekkasie verseker, met 'n 0,9-m-omhulsel van nagespanne beton, wat ontwerp is om sowel 'n neerstortende vliegtuig as 'n interne druk van 480 kPa te weerstaan. Vertikale, horisontale en koepelgespanne kabels in die beton word teen meer as 300 ton per kabel gespan.

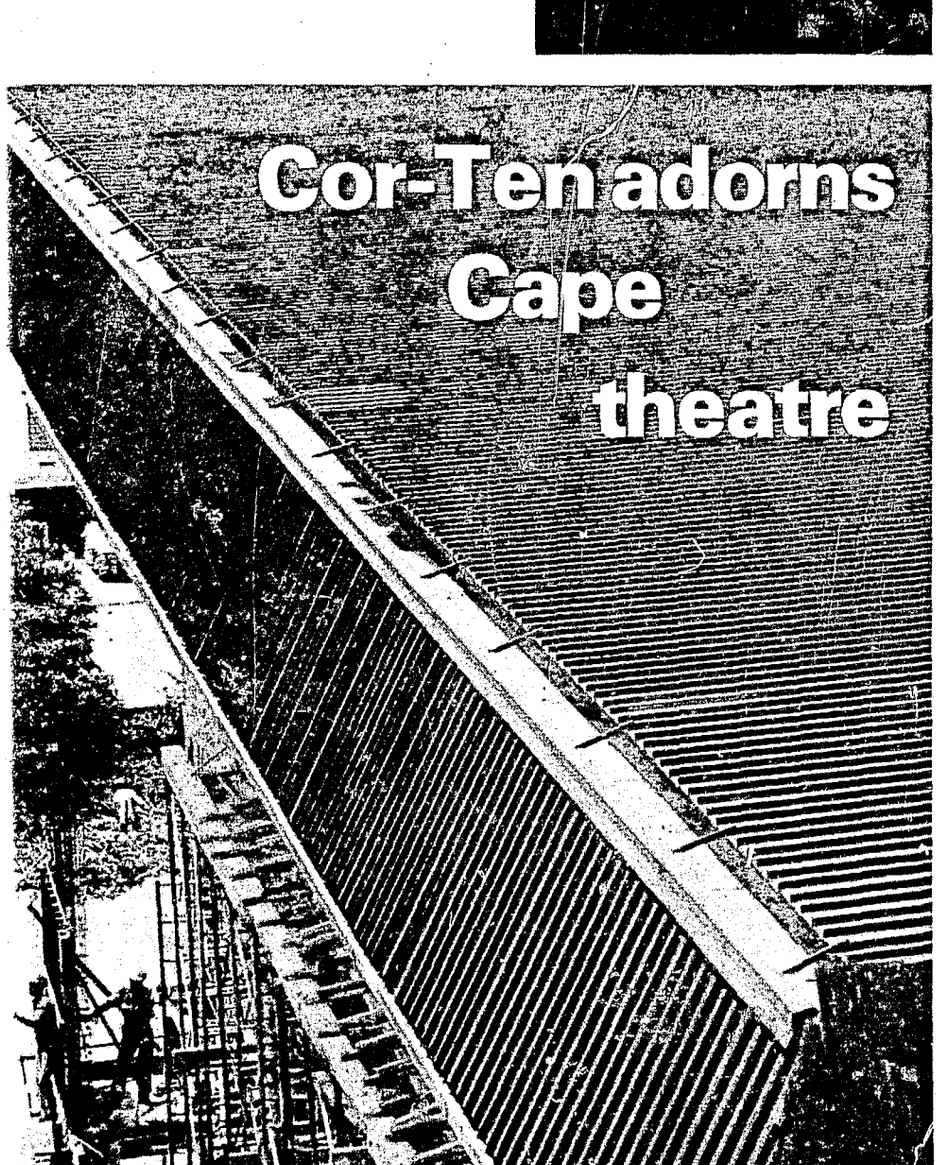
Benewens die 45 000 ton Yskorwapeningstaal wat by Koeberg gebruik word, word daar ook 500 ton staalplaat van 6 mm dik in elk van die twee reaktorgeboue aangewend.

Kortliks

«DIE INDRUKWEKKENDE Baxter-teater van die Universiteit van Kaapstad, wat teen 'n koste van R4,1-miljoen gebou is, spog met 'n dak van Yskor se Cor-Ten-fynplaat. Hierdie materiaal is onder andere gekies omdat dit 'n ligte massa het, esteties gevallig is, pas by die ontwerp van die teater en redelik ekonomies is, veral uit 'n instandhoudingsoogpunt. Omdat Cor-Ten sy eie beskermende oksiedlagie vorm wat verdere korrosie voorkom, hoef dit nie geverf of teen die elemente beskerm te word nie.»

«Die dak is voorsien deur Brownbuilt Metal Sections SA (Edms) Beperk, van Kaapstad, en die plate is in lengtes van 12 m deur die firma se fabriek in Boksburg-Noord per spoor na Kaapstad versend.

Cor-Ten adorns Cape theatre



WHEN Dr. W. D. Baxter, a former mayor of Cape Town, who had been largely responsible for the establishment of the Kirstenbosch Botanical Gardens, and for many years chairman of the council of the University of Cape Town, died in 1960, he bequeathed over half a million rand to the university for the purpose of building a theatre. In 1967 the university provided the site for the proposed theatre in its own grounds on Main Road, Rondebosch, and in 1977 the Baxter Theatre complex, built at a cost of R4,1 million, was completed. It was opened in November of that year.

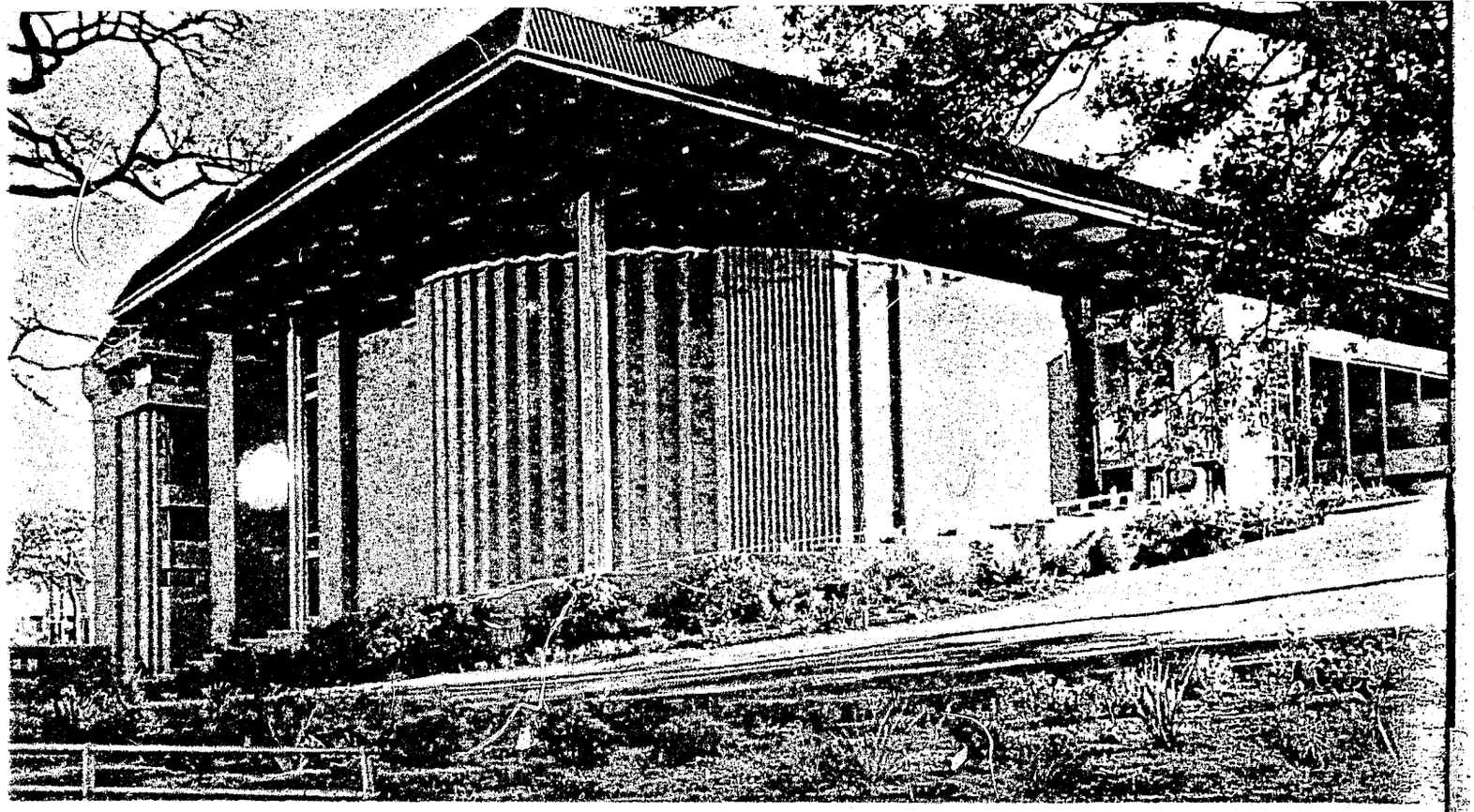
Iscor's high-tensile low-alloy Cor-Ten steel sheet was chosen, not inappropriately, for the roof — the crowning glory of this magnificent cultural centre. Not inappropriately, because it was realized that the rich brown, almost purple, hue of well-aged Cor-Ten would not only blend very well with the rough texture of the wall brickwork, but would also complement and highlight it.

When planning the theatre, the architect, Mr. Jack Barnett, stated his basic requirements for the roof as being a light-mass structure which would be aesthetically pleasing, fit in with the design of the theatre and would be reasonably economical, particularly from a maintenance point of view. All these requirements were more than adequately met by Cor-Ten. Exposed surfaces of Cor-Ten need not be painted or protected from the elements, since it forms its own protective oxide patina which is extremely dense and tightly adherent. Thus it seals out the atmosphere and inhibits further corrosive attack whilst preserving the structural strength of the steel.

Although the main roof itself

The almost vertical mansard and the concealed guttering of the main roof of the Baxter Theatre complex.

Die byna vertikale mansard en die versteekte geutwerk van die hoofdak van die Baxter-teaterkompleks.



The completed theatre offers this attractive aspect from Main Road.

Die voltooide teater bied hierdie aantreklike aansig uit Hoofweg.

would not be visible from the front or sides of the theatre, it was felt that because it would be looked down upon from the surrounding buildings, it had to be of the same standard as the distinctive mansard — the steeply sloping sides.

Because the site had a hillside character, fronting on Main Road, the architect was faced with a major design problem. The slope strongly suggested that the natural position for the auditoria seating should be arranged to face the road, thus placing the theatre and concert hall stages near its boundary. From Main Road, therefore, one is looking at what is essentially the back of the building. The problem was solved by creating a wide sweeping ramp to lead visitors to the main foyer entrance, midway up the site. The great roof thrusting far out over the ramp, accentuates this approach and adds greatly to the visitor's sense of welcome.

The main contractor for the building complex was R. H. Morris (Cape) (Pty) Limited, and the erection of the roof was undertaken by Longspan (Pty) Limited. Brownbuilt Metal Sections SA (Pty) Limited, of Cape Town, negotiated the supply of the Cor-Ten roofing sections. These were rolled from 0,8 mm thick sheet in Brownbuilt's plant at Boksburg North and transported to the Cape by rail. The sheets for the main roof are 12 m long and those for the mansard about 3 m. Because the tensile strength of Cor-Ten is between 40 and 50 per cent higher than that of ordinary structural quality carbon steel, it can be used in thinner sections to reduce mass, whilst larger purlin spacings are also possible.

The Baxter complex consists essentially of the two brick structures of theatre and concert hall, connected by the glass-faced foyer. Each brick had its face removed prior to delivery to site, providing the rough texture in which the joints between the bricks are less conspicuous and the resulting walls more "monolithic". The foyer is made up of a series of terraces, at various contour levels, each linked to the adjoining gardens and external courtyards.

An interesting and unusual feature of the theatre auditorium is the wire ceiling. This has a number of practical advantages: it is acoustically transparent, permitting a much greater beneficial acoustic volume than if a solid ceiling had been used. Also, the numerous technical services in the roof space, such as air-conditioning, loudspeakers and lighting, are accommodated functionally and freely but out of sight.

The uninitiated are often surprised to discover how much larger the stage and its facilities are than the auditorium. Being 26 m deep from the front of the apron to the back, 37 m across at its widest and 20 m high, it is comparable to the best modern equivalents. The stage can readily accommodate ballet, drama and opera, the intimate relationship with the auditorium making the theatre stage suitable for both large and small-scale presentations.

The concert hall, the second large auditorium, was planned pri-

marily as a venue for music recitals, although it is also suitable for certain theatrical productions. Its most distinctive features are its generous and lofty proportions. its circular shape and its impressive roof structure. The form of the latter derives mainly from engineering concepts. The visible underside of the roof is made up of 20 precast concrete girders, tied into a central core and supported on columns at their outer extremities. The stage of the concert hall is approximately semi-circular, with a radius of 7,6 m, i.e. 15,2 m wide at the rear and 7,6 m deep.

The theatre auditorium seats 657 on three levels — 443 in the stalls and 107 each in the dress and upper circles. The concert hall auditorium seats 640, the arena taking 502 and the loge 138. Dressing rooms are on two levels and can accommodate 80 players, including two "star" dressing rooms and an orchestra conductor's dressing room. The complex also houses a modern television studio with a floor area of 120 m^2, a control room and all the necessary technical support areas.

Although bare Cor-Ten is not recommended for use in highly corrosive atmospheres, such as in the immediate vicinity of the sea, Iscor officials who visited the site considered this location in Rondebosch far enough from the sea to permit the use of Cor-Ten roofing. Because of the rusty appearance of Cor-Ten, especially in the early stages of weathering, the site foreman reported almost daily enquiries from painting contractors who were concerned at the visible "havoc" the rust was playing with the unprotected steel roof!

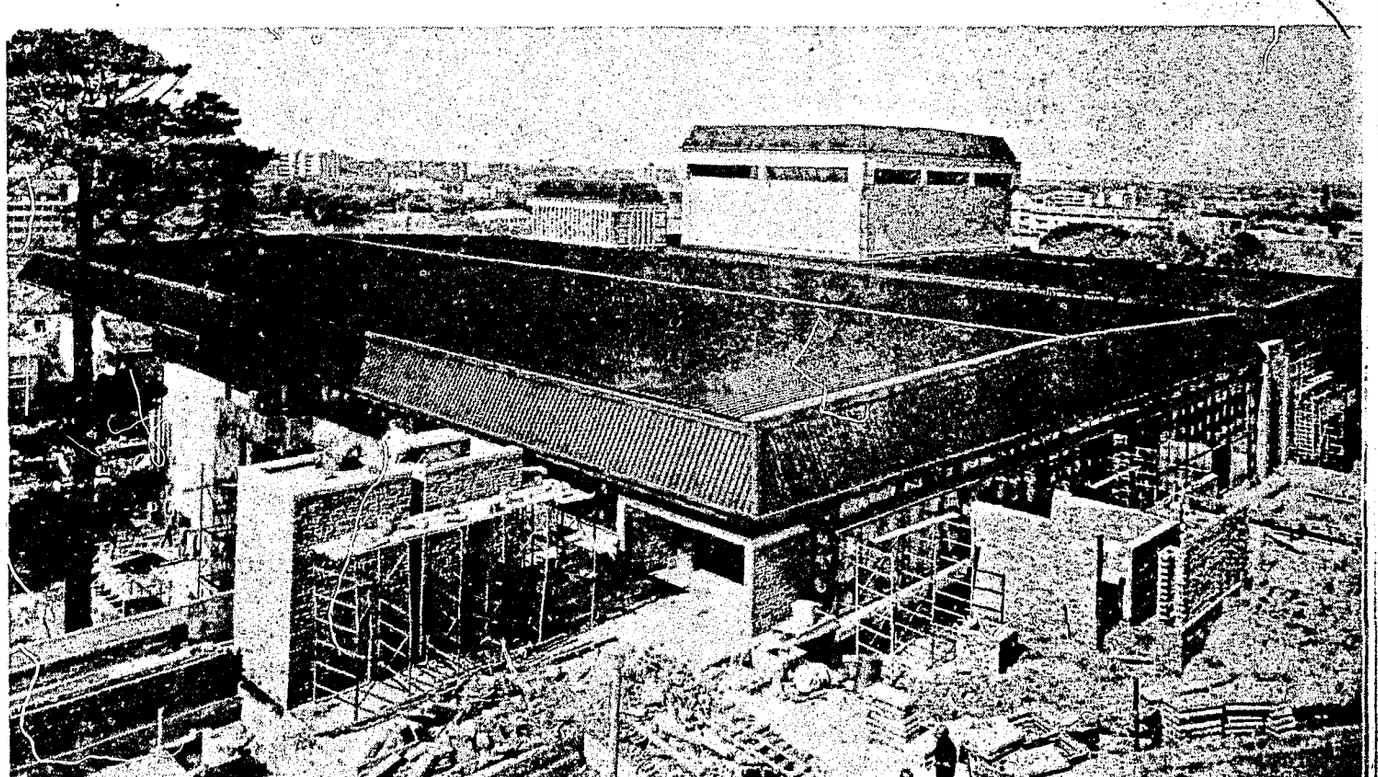
Brownbuilt sheets can be used for roof pitches from 1 : 60 and vertically for cladding. An important advantage of the Brownbuilt roofing system is that the sheeting is not punctured in any way and therefore cannot leak. It is fixed by means of concealed clips fastened to the top of the purlins. After laying, the interlocking sheets are given lateral stability by button punching at 150 mm on either side of the clips and at mid-span not exceeding 900 mm centres. This sheeting can withstand distributed loads of 0,718 kN/m^2 and, when subjected to wind loads, an uplift of a minimum value of 1 600 Pa.

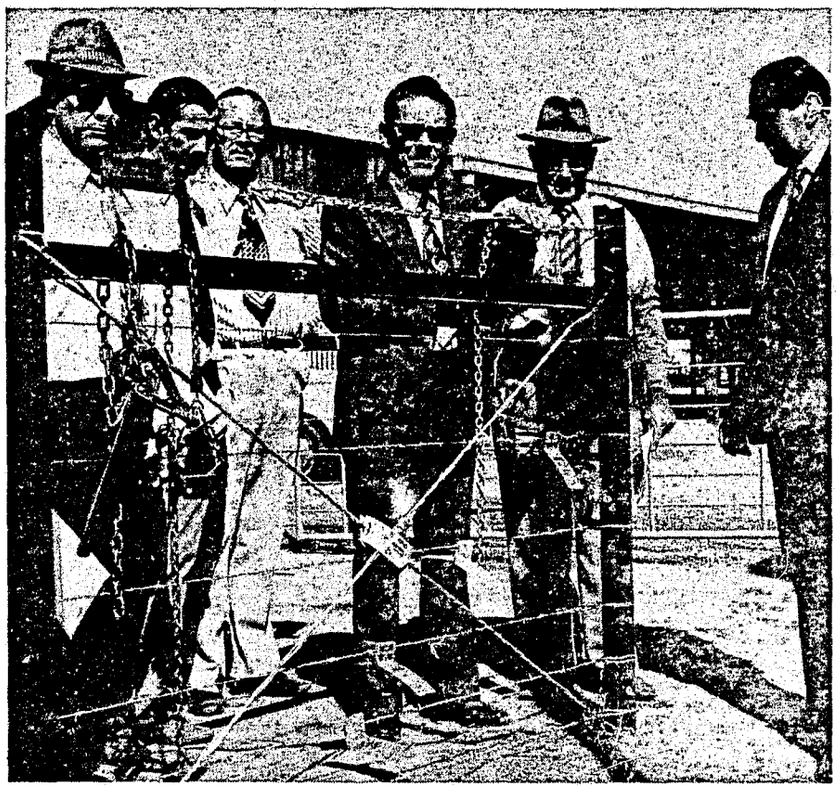
The total roof area of the Baxter complex is 4 600 m^2, including about 1 000 m^2 of mansard area. Because of the steep slope of the latter, button punching of this part of the roof was done by a person who is also a mountaineer and used his climbing outfit to scale the mansard for the job.

The Cape Town theatre critic, Owen Williams, described the Baxter as: "Undoubtedly the best theatre and certainly one of the best buildings in South Africa. As a theatre it is of good international standard — it would be impressive anywhere". And to this impressiveness the roof contributes in no small measure.

The Baxter Theatre complex nearing completion. The roof is already assuming the brown hue which is typical of Cor-Ten.

Die Baxter-teaterkompleks nader voltooiing. Die dak is reeds besig om die bruin kleur aan te neem wat kenmerkend van Cor-Ten is.





'n Demonstrasie van die vasmaak van draad en ankers aan die trekpale tydens die meganisasiedae wat deur die Afdeling Landbou-ingenieurswese by Silverton gehou is. Vir demonstrasie-doeleindes is Yskor se volledige reeks heiningdraad in die heining aangebring. Die demonstrasie word gelewer deur mnr. N. B. J. van Rensburg (vierde van links), Senior Bemarkingsbeampte van die afdeling Landbou- en Openbare Sektor. Heel regs staan mnr. J. F. van der Merwe, Hoof van die afdeling.

A demonstration of the tying of wire and anchors to the straining posts at the mechanization days held by the Agricultural Engineering Division at Silverton. For demonstration purposes, Iscor's whole range of fencing materials were used in the fence. The demonstration is being carried out by Mr. N. B. J. van Rensburg (fourth from the left), Senior Marketing Official of the Agriculture and Public Sector division. Standing on the extreme right is Mr. J. F. van der Merwe, Head of the division.

Uitstalling slaag

'N UITSTALLING en demonstrasies van heiningmateriaal wat Yskor onlangs tydens twee meganisasiedae van die Afdeling Landbou-ingenieurswese van die Departement van Landbou-tegniese Dienste by Silverton, Pretoria, gehou het, was die suksesvolste wat tot dusver op gespesialiseerde boerderybyeenkomste aangebied is. Boere van heinde en ver het die uitstalling van die Korporasie se volledige reeks heiningmateriaal besoek en die draadspan-demonstrasies dopgehou. Die uitstalling is gereël deur die afdeling Landbou- en Openbare Sektor van Yskor se departement Staalbemarking.

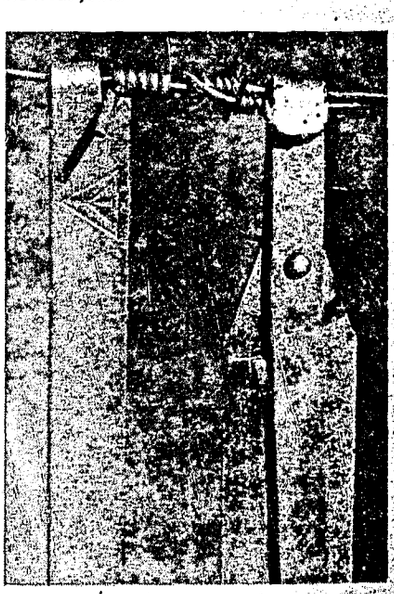
Op die uitstalling was trekpale, Y- en I-pale, Rifrug-sparre, Campeon- en Iowa-doringdraad, Yskor 1000-staaldraad, binddraad en Auto- en Silver-baaldraad te sien. Die demonstrasies het die hantering, oprigting en vasmaak van die draad behels en het die gebruik ingesluit van die Korporasie se spesiale klem- en draaisleutels wat vir die span van Campeon en Yskor 1000 gebruik word. Meer as 380 stelle van die sleutels — wat teen R1 per stel beskikbaar is — is van die hand gesit. Die Korporasie laat die sleutels spesiaal vervaardig en hulle is ook van landboukoöperasies verkrygbaar. Van die sleutels is al na Kanada uitgevoer (kyk Yskornuus, Mei 1972).

Die lassleutels se welslae is hoofsaaklik aan die eenvoudige ontwerp en werking daarvan te danke. Dit bestaan uit twee klein implemente, naamlik een wat as 'n „tang" aangewend kan word en 'n ander wat die funksie van 'n „opwensleutel" verrig. Die tang is voorsien van 'n beweegbare hefboom, wat gebruik word om die draad mee vas te hou terwyl die las gemaak word. 'n Keep in die opwensleutel maak dit moontlik om die een draad netjies om die ander te wen tydens die maak van die las. Die sleutel kan ook vir die vasmaak van draad aan pale of sparre aangewend word.

Die benamings Y- en I-pale

Yskor se lassleutelstel. Links is die „opwensleutel" en regs die „tang". Let op die netjiese las.

Iscor's joining tool set. On the left is the "winder" and on the right the "pliers". Note the neat joint.



verwys na die profiele van die pale. Die voordeel van Y-pale is dat lyndrade na willekeur gespasieer kan word na gelang van die spesifieke vereistes. Y-pale is ook beskikbaar met gate wat 50 mm uit mekaar gespasieer is en steeds willekeurige draadspasiëring toelaat.

Sowel Y- as I-pale is beskikbaar in standaardlengtes van 1 400 en 1 850 mm, terwyl nie-standaardlengtes van 1 100 tot 3 650 mm, in inkremente van 150 mm, ook spesiaal beskikbaar gestel kan word. Y-pale se massa is 2,50 kg/m teenoor I-pale se 3,00 kg/m.

Trekpale word ook verskaf. Vir dié doel word spoorstaafprofiele van 10, 15 en 22 kg/m gebruik.

Die Rifrug-spar, ook die T-spar genoem, is die enigste heiningspar wat deur die Korporasie verskaf word. Soos in die geval van die Y-paal, maak die spar ook voorsiening vir willekeurige spasiëring van lyndrade. Die spar is aan die voorkant van riwwe en aan die agterkant van kepe voorsien, wat verseker dat die lyn- en binddraad nie kan gly nie. Die spar se massa is 0,56 kg/m en dit is verkrygbaar in lengtes van 950 tot 1 850 mm, in inkremente van 150 mm. Langer lengtes kan op versoek verskaf word.

Iowa is 'n dubbelstring-doringdraad, elke string met 'n deursnee van 2,50 mm, en word met twee sinkdeklae aangebied — volversink (met geel etiket) en ligversink (met rooi etiket). Dit is 'n laekoolstof-draad, daarom staan dit ook as sagtestaaldraad bekend.

Campeon is 'n ovaalvormige enkelstring-doringdraad van hoë treksterkte en met hoë koolstofinhoud en beskik oor die buitengewone eienskap dat dit „dood" is — as dit sou breek terwyl dit gespan word, spring dit nie terug om 'n kraaines te vorm nie. Campeon het 20 persent meer dorings as ander doringdraad en die dorings word stewig vasgehou deur skouers weerskante van die doring. Die ovaal vorm van die profiel verhoed dat die doring draai. Campeon is ook meer korrosiebestand omdat die enkele string minder vog versamel.

Campeon word in twee diktes aangebied. Die dunner tipe — 2,80 x 1,90 mm — word volversink (met geel etiket) en ligversink (met rooi etiket) aangebied, terwyl die dikker tipe — 3,15 x 2,50 mm — slegs met 'n ligversinkte deklaag (rooi etiket) beskikbaar is.

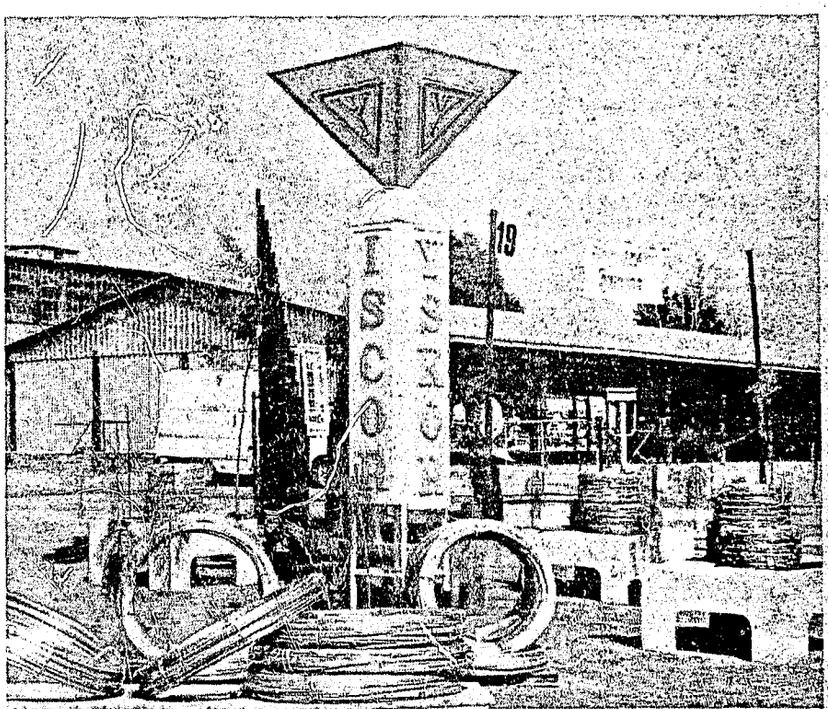
Yskor 1000 is 'n gladde staaldraad — dieselfde string wat vir Campeon van 2,80 mm gebruik word — en is met sowel ligversinkte as volversinkte deklae verkrygbaar. Die naam Yskor 1000 dui op die breekkrag van die draad, naamlik 450 kg (1 000 lb).

Auto-baaldraad is 'n swartdraad en Silver-baaldraad 'n ligversinkte draad, wat albei in outomatiese baalmasjiene vir baaldoeleindes gebruik word. Die voordeel van Silver-baaldraad is dat dit nie roes indien klam voer gebaal en geruime tyd voor gebruik opgeberg word nie.

Al Yskor se heiningmateriaal kwalifiseer vir subsidiedoeleindes ooreenkomstig die Grondbewaringswet.

Briefly

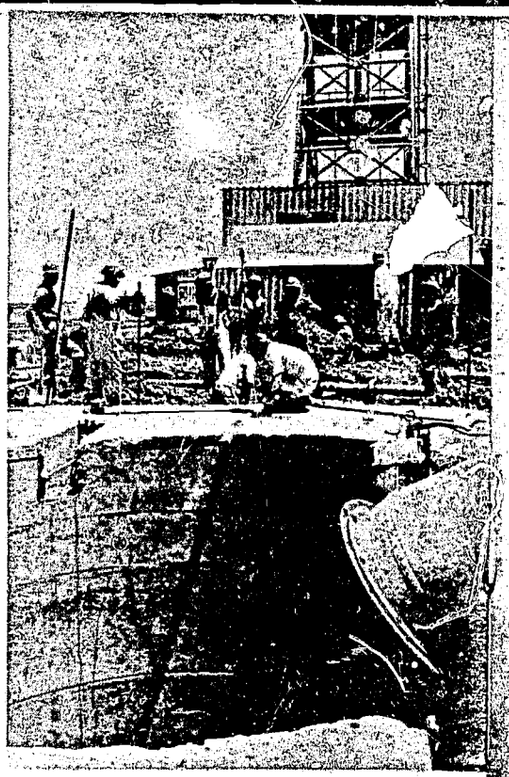
AN EXHIBITION and demonstrations of fencing materials by Iscor during two mechanization days held by the Agricultural Engineering Division of the Department of Agricultural Technical Services, have been the most successful so far at specialized farmers' gatherings. The Corporation's whole range of fencing materials — straining posts, Y and I fencing posts, Ridgeback drippers, Campeon and Iowa barbed wire, Iscor 1000 steel wire, tying wire and Auto and Silver baling wire — were on display.



'n Gedeelte van Yskor se uitstalling van heiningmateriaal tydens die meganisasiedae. Versinkte binddraad van verskillende diktes is op die voorgrond te sien, met verskillende tipes doringdraad op die agtergrond.

Part of Iscor's exhibit of fencing materials during the mechanization days. Galvanized tying wire of various thicknesses is to be seen in the foreground, with different types of barbed wire in the background.

TWO NEW SHAFTS IMPROVE VENTILATION



The upcast shaft and collar, with the headgear of the downcast shaft in the background.

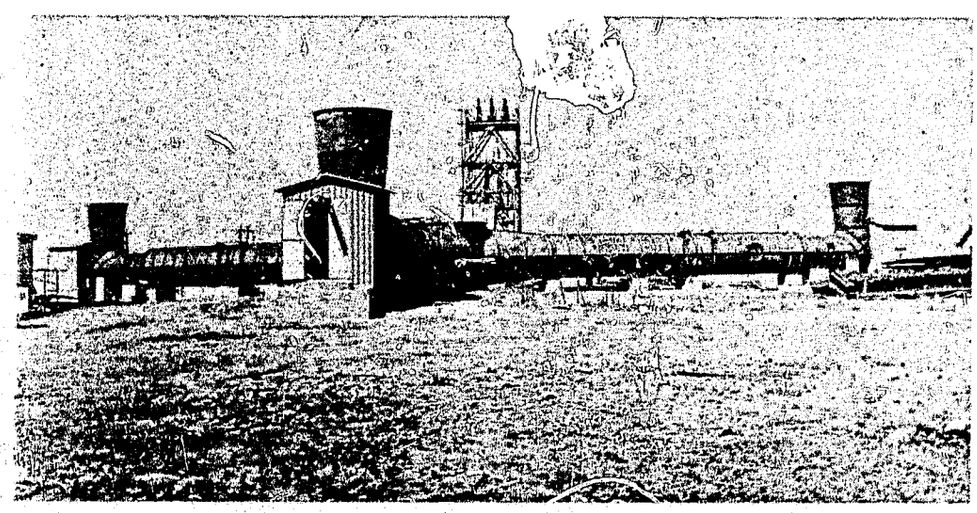
Die uittreklugskag en kraag, met die skagtoring van die intreklugskag op die agtergrond.

FACILITIES for additional underground ventilation in the form of a complex consisting of two vertical shafts, the one being equipped with exhaust fans, is nearing completion at Iscor's Durnacol coal mine near Dannhauser in Natal. The additional facilities have been necessitated by the almost doubling of the mine's production to cater for the increasing requirements of straight coking coal at the Corporation's Newcastle and Vanderbijlpark Works.

The two shafts, known as Nos. 10 and 11, are sited in the north-western part of the coal-field, known as the 600 area. They are approximately 30 m apart, 4,0 m in diameter, and the depth of the coal seams is 278 m — the deepest shafts at Durnacol and amongst the deepest at South African collieries.

Development into the north-western portion of the coal-field began early in 1975 as part of a programme to increase production. At that stage only one mechanized unit and two hand-loading sections were operating in this area, and ventilation provided by the Nos. 5 and 6 shafts complex was adequate for these activities.

Two faults and a dyke had to be negotiated to gain access to the north-western coal-field through an area which had been abandoned for many years. Towards the end of 1976 the stage was reached where, owing to pitroom and geological problems in the new No. 7 mine area, it became necessary



The three exhaust fans and ducting of the upcast shaft and, in the background, the headgear of the downcast shaft.

Die drie uitlaatwaaiers en die leiding van die uittreklugskag en, op die agtergrond, die skagtoring van die intreklugskag.

K S

GERIEWE vir bykomende ondergrondse ventilasie in die vorm van 'n kompleks van twee nuwe vertikale skagte — een met waaiers toegerus — nader voltooiing by Yskor se Durnacol-steenkoolmyn in Natal. Die bykomende geriewe is genoodsaak deur die verdubbeling van die myn se produksie met die oog op die toenemende behoeftes aan klaarkooksteenkool by die Newcastle- en Vanderbijlpark-werke.

Die twee skagte, bekend as nrs. 10 en 11, is in die noordwestelike deel van die steenkoolveld gegrawe. Hulle is ongeveer 30 m van mekaar af en 278 m diep — die diepste skagte by Durnacol en van die diepstes van hul soort in Suid-Afrika. Die kompleks is toegerus met drie elektries aangedrewe waaiers, elk met 'n lugverplasingsvermoë van 62,5 m³/s teen 1,75 KPa.

to initiate two additional mechanized sections and one longwall section.

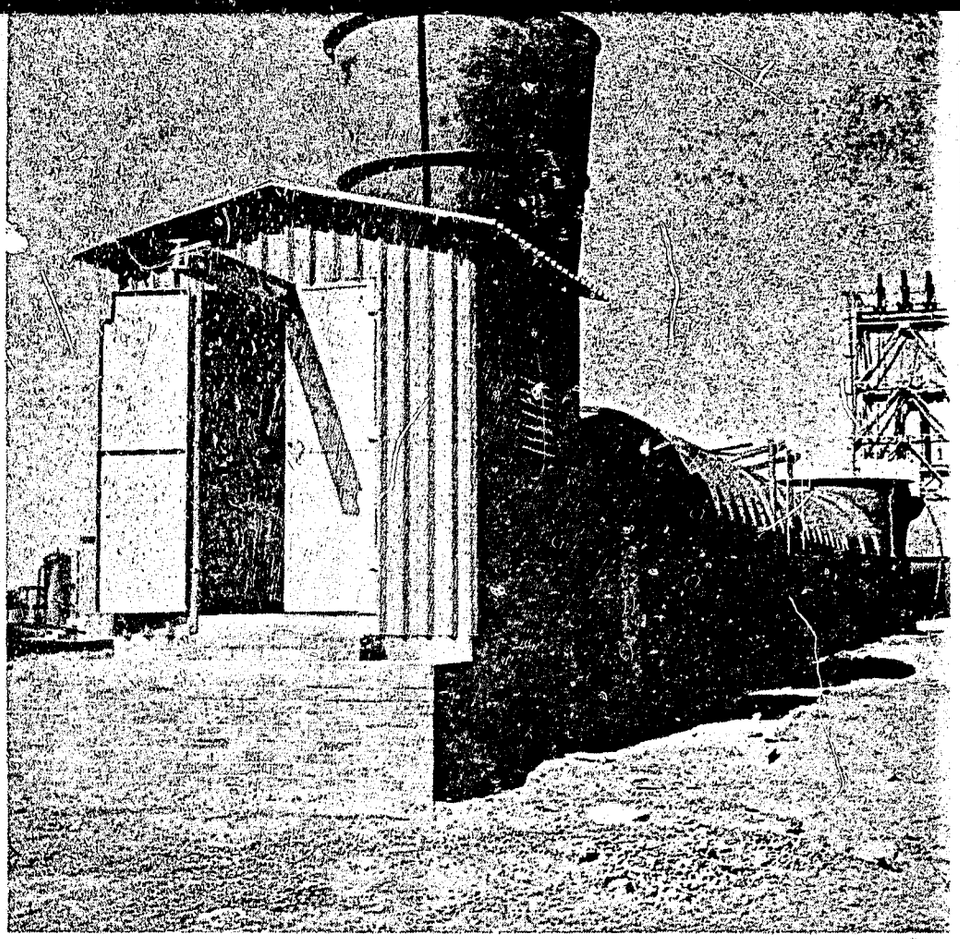
The provision of adequate ventilation then became critical, with capacity at Nos. 5 and 6 shafts being used to the maximum. Detailed ventilation surveys revealed that in both short and long term there was no alternative but to sink additional ventilation shafts in the north-western area.

In the original planning for increasing Durnacol's production it was envisaged that at a later stage of development of the mine workings additional shafts would have to be sunk. The final positioning of such shafts could not be determined at that stage, as it depends entirely on the demands of mining activity. Capital expenditure on a project of this nature is considerable, therefore several alternative schemes were considered, both as regards the methods of sinking to be employed and the fan installation on surface.

For all alternatives it was necessary to sink two shafts because the complex had to cater for both intake and exhaust ventilation. Tenders were invited on certain specific layouts and also for alternatives proposed by tenderers. Some interesting alternatives to the schemes proposed by Durnacol were received.

From the several alternatives considered, the layout finally chosen differed quite substantially from the original ideas, but management is satisfied that capital expenditure will be fully exploited. Particular features of the layout are its flexibility and minimum capital cost. It has been so planned that consumption of electricity will be restricted and that an expected gradual increase in ventilation demand will be catered for.

Utilization of the complex has been planned to take place in stages. The first stage entails using No. 10 shaft for extracting exhaust air from the mine and No. 11 shaft for fresh intake air into the mine. Three single-stage 1,86 m diameter axial flow fans, each with 12 variable pitch blades and vertical evasees, driven by 186 kW motors at a speed of 960 r/min, have been erected at the top of No. 10 shaft. Each fan will exhaust 62,5 m^3/s of air at 1,75 KPa. The layout ensures that each fan is situated at least 25 m from the shaft (a safety precaution), each with its own motor house incorporating lifting facilities and instrumentation.



One of the three fans at the new ventilation shafts at the Durnacol coal mine.

Een van die drie waaiers van die nuwe ventilasieskagte by die Durnacol-steenkoolmyn.

To cater for the three ventilation ducts from the shaft top to each fan, a rondavel-shaped, fabricated steel structure has been erected over the shaft. The top or roof section forms the explosion doors and consists of segments laid loosely on the top and sealed with bitumen.

The ducting to the fans is tubular and fabricated from 6 mm thick steel plate, the internal diameter being 2,55 m. Self-closing doors and access doors form part of the ducting. A central substation has been built for the distribution of power to the complex, and the fan starting gear is also housed there.

It is anticipated that, to start with, only one fan will be commissioned and the pitch of the blades will be altered according to demand until maximum capacity is reached. Thereafter, the second and third fans will be brought into operation on the same basis.

The second stage of utilization involves moving one of the three installed fans to No. 11 shaft and purchasing a fourth identical fan for installation at this shaft. This will mean that both shafts will be used for exhausting air from the mine with two fans on each shaft.

When this latter stage is reached, additional intake capacity will have to be provided elsewhere, probably by sinking another shaft and by connecting up to the Nos. 3 and 4 shafts complex. It is expected that the complex will be capable of exhausting approximately 220 m^3/s of air from the mine.

Die geleentheid is daar

TEN SPYTE van die ekonomiese insinking is daar nog geleentheid om nuwe nywerhede in Suid-Afrika te begin as 'n ondernemer 'n goeie idee het, of 'n produk wat tot dusver ingevoer moes word, ekonomies plaaslik kan vervaardig. So gio 'n immigrant uit Wes-Duitsland wat self so 'n geleentheid benut het en feitlik uitsluitlik Yskorstaal vir sy produksie gebruik.

Hy is mnr. W. K. Topka, wat in 1969 sy eie onderneming in 'n ou woonhuis in Turffontein, Johannesburg, begin het. Aanvanklik is „enigiets van die vervaardiging van kersblakers tot ander los werkies" onderneem, maar toe stel mnr. Topka vas dat die dromme wat in Suid-Afrika deur kabelvervaardigers vir die opwen van kabels gebruik word, ingevoer word. Hy het in 1970 onder die maatskappynaam Topring Engineering (Edms) Bpk tot hierdie terrein toegetree en spoedig moes die onderneming, wat intussen van die woonhuis na 'n klein fabrieksgebou in Turffontein verskuif was, na 'n groter perseel in Alrode, Alberton, verskuif, word, waar dit tans nog gehuisves is.

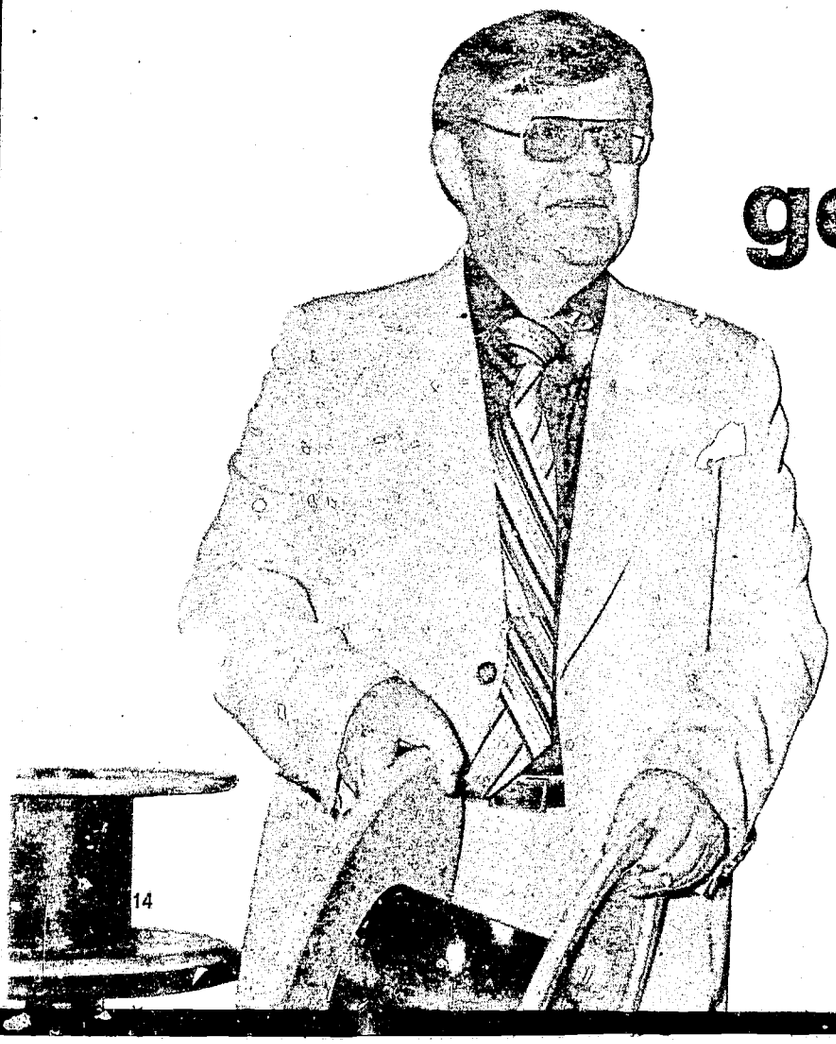
Dit het so voorspoedig gegaan dat hy binne enkele jare die grootste vervaardiger van kabeldromme geword het. Later is Topkabeldromme (Edms) Bpk as vervaardigingsmaatskappy gestig, terwyl Topring Cable Drums die handelsnaam geword het. Buitelandse konkurrensie is dermate uitgeskakel dat mnr. Topka onlangs deur 'n groot dromvervaardiger van Wes-Duitsland, wat voorheen hier heelwat sake met dié soort dromme gedoen het maar nou die plaaslike mededinging voel, genader is om aandele in sy onderneming te koop. Hierdie aanbod word nog oorweeg.

Die grootste klante op hierdie gebied is, onder meer, Aberdare Cables, Asea Electric, Scottish Cables, Aycliffe Cables, Siemens Cables, African Telephone Cables, H & J Industries en J. Illman & Co. 'n Paar jaar gelede, toe die ekonomie in volle bloei was, was daar, benewens die vyf Blankes wat aan die maatskappy verbonde is, 32 Swart werknemers in diens. Vanweë die ekonomiese insinking is die getal Swart werknemers tot 18 verminder, maar sedert Februarie vanjaar word verhoogde bestellings vir dromme ondervind en mnr. Topka meen daarin die voorspel tot 'n algemene ekonomiese oplewing te bespeur.

Benewens kabeldromme, wat uit Yskor-fynplaat en -grofplaat vervaardig word, maak die maatskappy ook sekere hanteringstoerusting vir die nywerheid en die landbou uit dieselfde materiaal. Dit sluit in kantelbakke wat voor aan bestaande tipes vurkhefwaens gemonteer word en soortgelyke bakke wat op die driepunt van 'n trekker gemonteer word om die werk van 'n klein sleepwa te doen. Laasgenoemde is bekend as 'n Donkie en ten volle gepatenteer.

Sedert onlangs word 'n klein kabeldrom met glasveselsykante en 'n opwensilinder van Yskor-fynplaat vervaardig. Dit sal gebruik word vir die opwen van dun kabel wat met isoleermateriaal van slegs 0,2 mm bedek is. Tot dusver moes hierdie dromme ingevoer word.

Die aandeelhouers in die twee maatskappye is mnr. Topka, besturende direkteur, sy vrou, mev. J. Topka, en mnr. H. van Rensburg, wat die produksiebestuurder is.

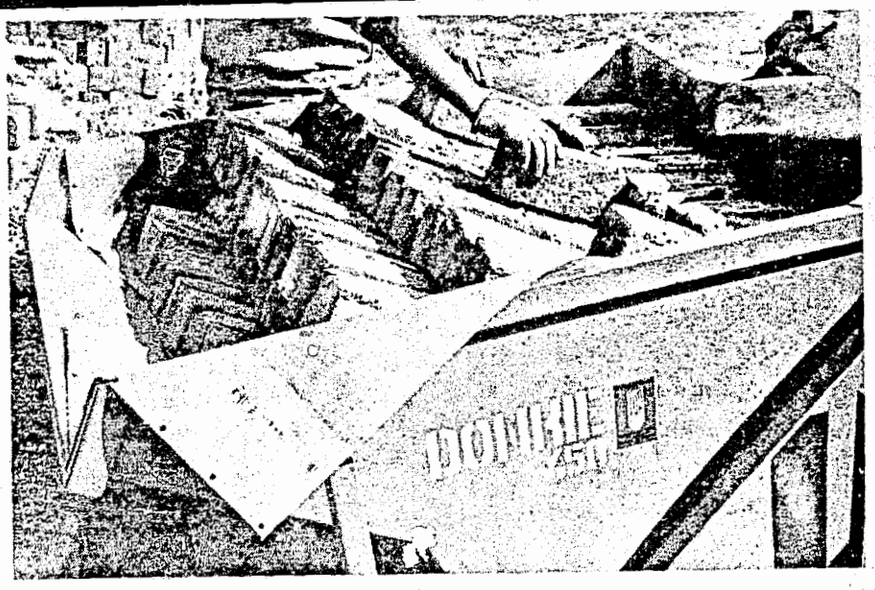


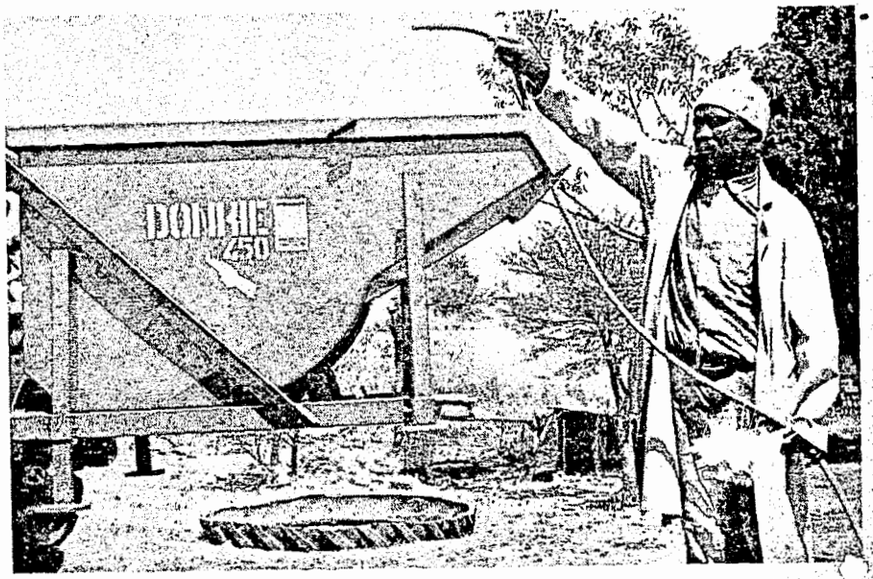
Kabeldromme wat deur Topkabeldromme (Edms) Bpk, van Alrode, Alberton, uit Yskor-staal vervaardig is. Die persoon is mnr. W. K. Topka, besturende direkteur van die maatskappy.

Cable drums manufactured by Topkabeldromme (Pty) Ltd, of Alrode, Alberton, from Iscor steel. The person is Mr. W. K. Topka, managing director of the company.

Briefly

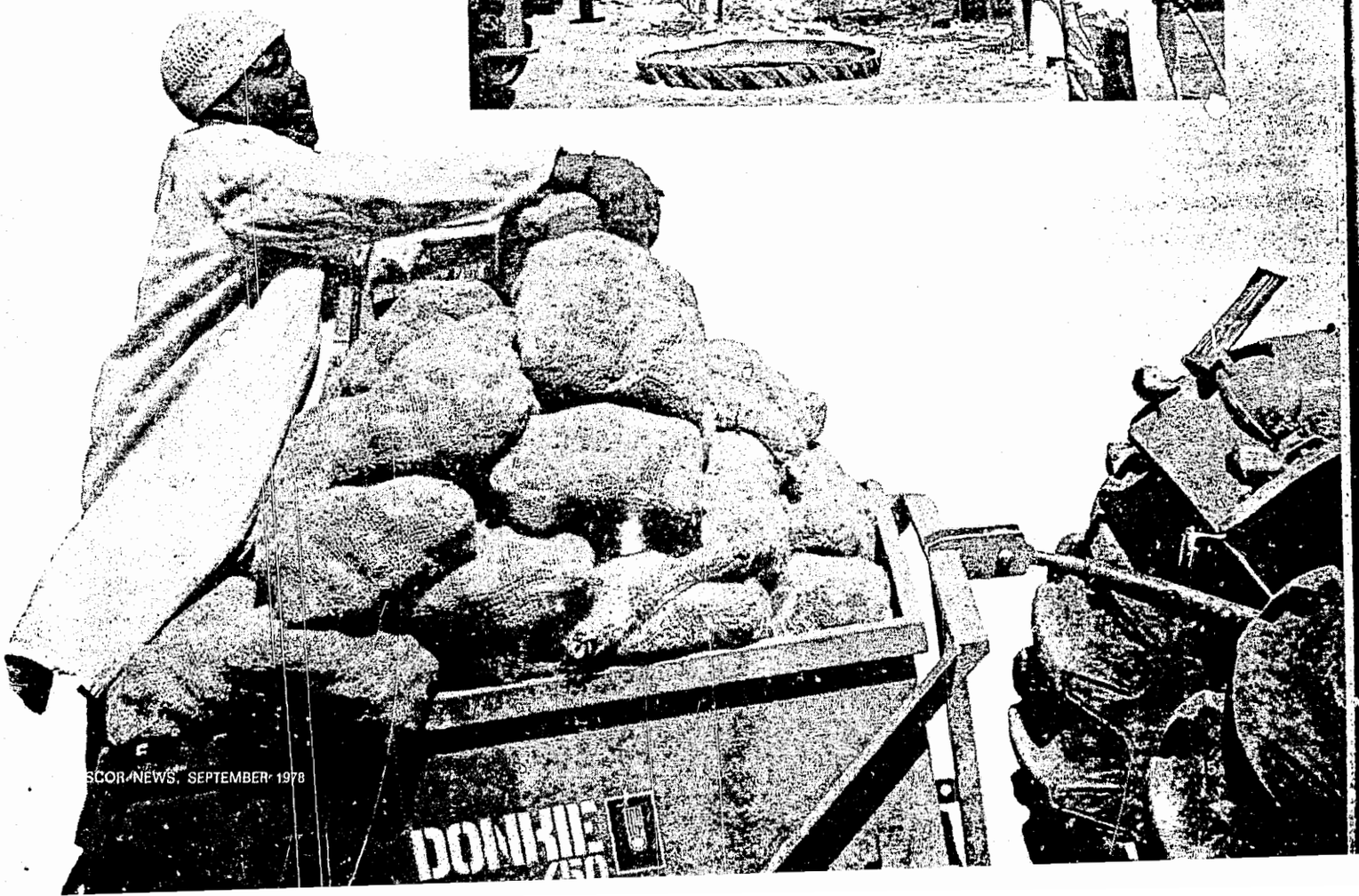
DESPITE the economic recession there is still opportunity to establish new industries in South Africa if the entrepreneur has a good idea, or if a product which was formerly imported, can be produced locally on an economic basis. This is the opinion of Mr. W. K. Te ka, an immigrant from West Germany and managing director of Topring Cable Drums (Pty) Ltd and Topkabeldromme (Pty) Ltd, who exploited an import replacement opportunity when he observed that cable drums were being imported. Currently his concerns are regarded as the largest manufacturers and suppliers of cable drums in the country, and they also supply materials handling equipment for industry and agriculture. Iscor steel is used almost exclusively for all these products.



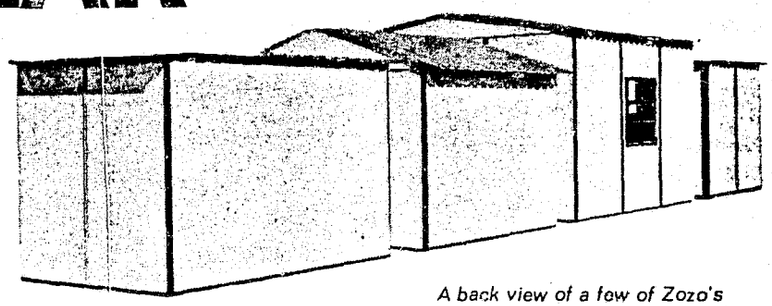


'n Paar aanwendings van die Donkie: bo, vir die vervoer van bakstene; regs, as 'n waterdraer; onder, in die landbou.

A few applications of the Donkie: above, for transporting bricks; on the right, as a water carrier; below, in agriculture.



MODULAR STEEL BUILDINGS



A back view of a few of Zozo's remountable buildings. The roofs are rolled from Iscor galvanized sheet.

'n Agteraansig van 'n klompie van Zozo se heroprigbare geboue. Die dakke word uit Yskor-sinkplaat gewals.

STEEL is ideal for the erection of site offices and other temporary buildings as it is one of the few materials that can really be successfully dismantled and reassembled without damage to the components. The country's warm climate causes no problem, as effective vents can be used, and the winter cold is only a small negative factor, for in the day-time the sun usually shines and quickly warms up the buildings.

This is the opinion of Mr. M. H. B. Joubert, joint owner with his wife, Mrs. R. H. Joubert, of Zozo (Pty) Ltd, Alberton — a young company but already widely known for its remountable steel buildings and steel playground equipment.

Zozo can supply more than 120 steel buildings in various sizes and for various purposes in the form of modular components. Its playground range includes more than 23 different items.

The company was started by the couple in 1969. After a while it was realized that playground equipment had a limited hire market, so it was decided to manufacture these products, including wendy houses and trampolines. The manufacture of remountable buildings followed when the demand for them became apparent.

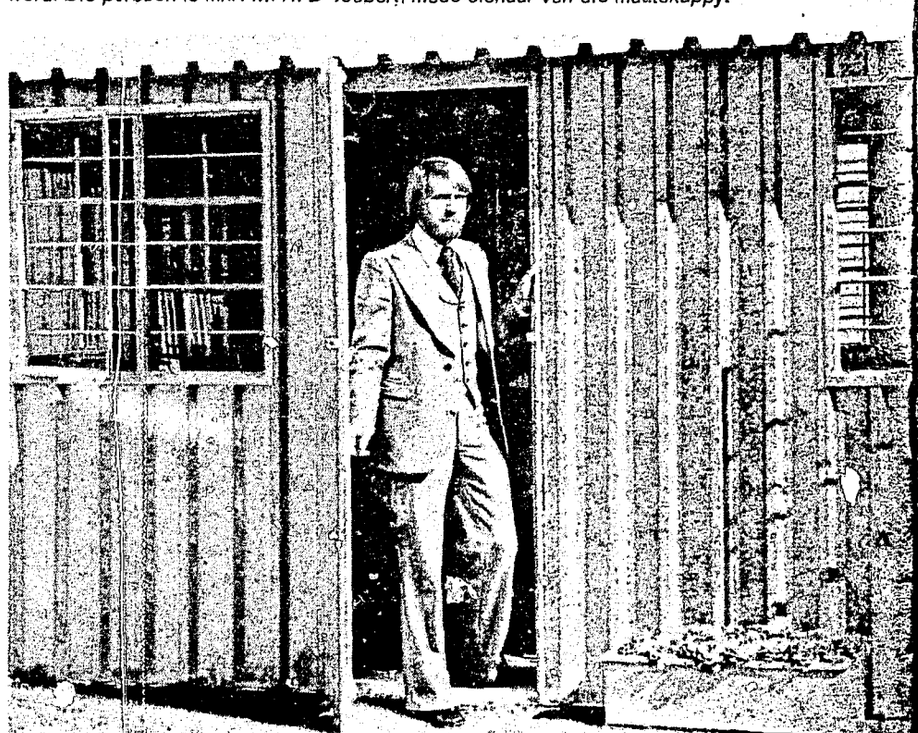
All the buildings offered have galvanized steel roofs, whether the walls are clad with steel, asbestos or composition board. "The all-steel buildings are the easiest to knock down, remove and reassemble," says Mr. Joubert. "They can also better withstand this type of treatment. The other types of cladding are more suitable for garden use owing to the fact that they could be more pleasing to the eye."

He added: "Heat or cold is not such a problem with the all-steel buildings as one might think. The vents we use in the roofs are very effective, and as far as the winter cold is concerned, South Africa is a country of sunshine and buildings are soon warmed up."

He said the all-steel buildings were recommended for all parts of South Africa, except the warmer

A typical remountable all-steel site office manufactured by Zozo. The person is Mr. M. H. B. Joubert, joint owner of the company.

'n Tipiese heropribare perseelkantoor van staal wat deur Zozo vervaardig word. Die persoon is mnr. M. H. B Joubert, mede-eienaar van die maatskappy.



Kortliks

STAAL is ideaal vir die oprigting van perseelkantore en ander tydelike geboue, aangesien dit een van die weinige materiale is wat werklik met welslae sonder beskadiging van die komponente afgetakel en heropgerig kan word. Die land se warm klimaat veroorsaak geen probleem nie aangesien doeltreffende luggate aangebring kan word, en die winterkoue is slegs 'n geringe negatiewe faktor, want bedags skyn die son gewoonlik en verwarm die geboue vinnig.

Dit is die mening van mnr. M. H. B. Joubert, mede-eienaar saam met sy vrou, mev. R. H. Joubert, van Zozo (Edms) Bpk, van Alberton. Die maatskappy vervaardig 'n verskeidenheid van meer as 120 heroprigbare kantore en huise en meer as 23 verskillende soorte speelterreintoerusting. Staal van Yskor-oorsprong word hoofsaaklik gebruik.

regions of the Transvaal and Natal.

The buildings offered by the company are provided in modular form and vary in size to cater for the requirements of different customers. Buildings from as small as 1,8 x 1,8 m, with one window and door and costing R154, to cottage-type buildings of 5,4 x 9 m are often supplied.

An example of the latter was exhibited at the 1978 Rand Show, where it attracted keen attention from the public. It was a five-room cottage costing R1 692. It had six windows, three pairs of shutters, external and internal doors, and the doors and the outside of the house were painted. It included everything except the bathroom and kitchen fittings and the floor, for although floors are usually supplied as an optional extra with smaller buildings, a concrete floor is recommended for this cottage. It is regarded as ideal for use on farms. It can be easily dismantled and reassembled elsewhere.

Zozo keeps sufficient modular building components in stock to carry out any order at short notice. Playground equipment, such as swings, see-saws, jungle gyms and trampolines, is always in stock.

A piece of playground equipment of which the company is particularly proud, is a so-called mini gym — a smaller version of the jungle gym. Shortly after the company had been established, it was found that the family's eldest daughter — only one year old then —could not make use of the jungle gym as it was too big. This led to the design and manufacture of the mini gym, which is still regarded today as a unique piece of playground equipment in South Africa and is very popular with crèches. It can be used for children to play on at home or at a crèche with little danger of a child getting hurt. Steps with rails on either side lead up to an area made like a playpen with bars on the sides, and from here, on the other side, the child can ride down a slide. The child can do push-ups on parallel bars or hang from them. The mini gym is high enough to give a child the thrill of feeling high up in the air, but low enough to be safe in the event of a fall.

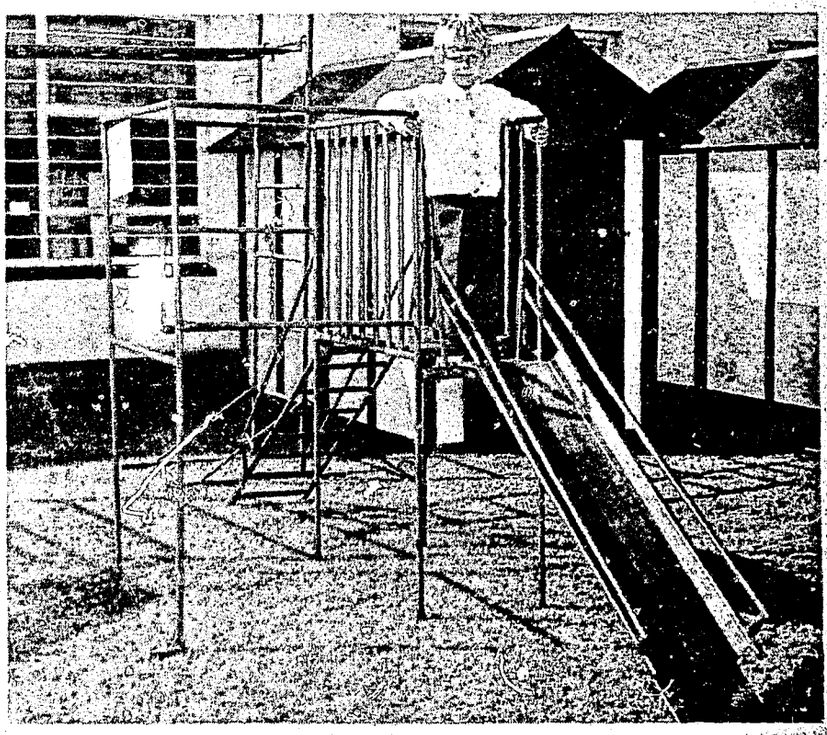
Zozo deliberately has no agents or retailers for the marketing of its products. It sells its own products from the same site on the Alberton main road where its factory is situated, and Mr. Joubert regards his company as one of the best advertised concerns of its size. The same advertising methods are used as those of large concerns such as liquor and cold drink companies. Extensive use is made of centre page strips in telephone directories and hoardings along highways. The fact that the company's premises are situated along the main street of the town is also of considerable advantage.

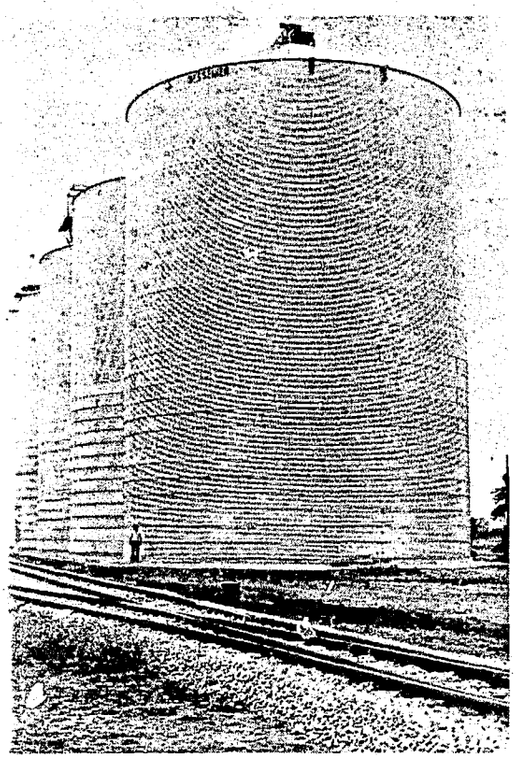
"We follow an aggressive marketing policy," declares Mr. Joubert. "The economic recession slowed down our expansion, but we did not sit back and accept the slump. We work twice as hard to keep up our turnover."

The company has 10 White and 30 Black employees. At present all steel requirements are purchased from merchants, but the ideal remains eventually to buy in bulk direct from Iscor.

The mini gym, one of the pieces of playground equipment specially designed by Zozo and very popular with crèches and families with small children.

Die mini-gim, een van die stukke speelgoedtoerusting wat spesiaal deur Zozo ontwerp is en baie gewild is by bewaarskole en gesinne met klein kinders.





Die reuse-staalsilokompleks op Crecy wat deur Bessemer Staalkonstruksie voorafvervaardig is uit staal wat spesiaal deur Yskor verskaf is. Dit is volgens aanspraak die grootste staalsilokompleks in die land en het 'n opbergvermoë van byna 60 000 m³.

The giant steel silo complex prefabricated by Bessemer Steel Construction from steel specially supplied by Iscor. It is claimed to be the largest steel silo complex in the country and has a storage capacity of almost 60 000 m³.

SILO'S

van staalplaat

'N TOTAAL van 724 ton gegolfde sinkplaat van hoë gehalte wat spesiaal deur Yskor verskaf is, is gebruik om die 12 buise van die land se grootste staalgraansuier — 'n kompleks van R1,3-miljoen — op Crecy op te rig. 'n Bykomende 98 ton Yskor-staal is by die bou van die toring, store, werkwinkel en vraggebied aangewend. Die eienaar is die Noord-Transvaalse Koöperasie Bpk, en die kompleks is opgerig om die „koringontploffing" op die Springbokvlakte die hoof te bied.

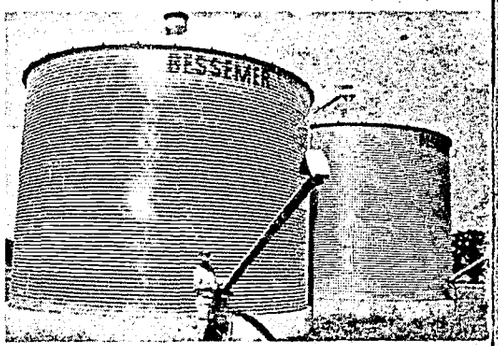
Dit is as 'n sleutelklaarprojek ontwerp en gebou deur Bessemer Staalkonstruksie (Edms) Bpk, van Krugersdorp, en dit is een van die grootste en hoogste strukture op die Springbokvlakte. Die hoogste punt van die kompleks is 41 m bo die grond. Agt van die silo's het 'n wandhoogte van 23,6 m en 'n deursnee van 18,1 m, terwyl die ander vier se mate onderskeidelik 24,4 en 9,1 m is. Die grotes het elk 'n inhoudsmaat van 6 533 m³ en die ander vier 1 634 m³ elk. Dit gee die kompleks 'n totale vermoë van byna 60 000 m³.

Die ultra-moderne kompleks word vanaf 'n sentrale kantoor beheer deur middel van 'n elektroniese kontrolebord. Inname per pad geskied teen 300 ton per uur. Spoortrokke en vragmotors kan teen 'n tempo van 100 ton per uur gevul word. Die kompleks beskik ook oor outomatiese invoer- en massametingstoerusting. Die koste per sak van die kompleks — R2,60 — is na bewering die laagste van enige soortgelyke projek wat in die jongste tyd onderneem is.

Die silo's is opgerig deur middel van voorafvervaardigde geboute konstruksies wat segmentgewys opgehys is. Dit is een van die goedkoopste dog nog doeltreffende metodes om silo's op te rig. Gesweiste konstruksies word as die doeltreffendste beskou, maar weens instandhoudingskoste — dit moet geverf word — is dié tipe konstruksie nie so prakties nie.

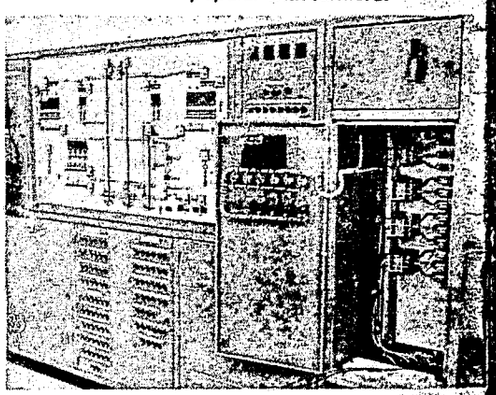
Die geboute konstruksies word met horisontale en vertikale verstywers aan die binnekant versterk. Die verstywers is spesiaal ontwerp en word uit plat staal gevorm. In die geval van die Crecy-silo's is vir die verstywers ook spesiale staal gebruik.

Intussen het Bessemer onlangs die kontrak verower vir die oprig van die grootste enkele silo in Suid-Afrika. Die klant is Nola-



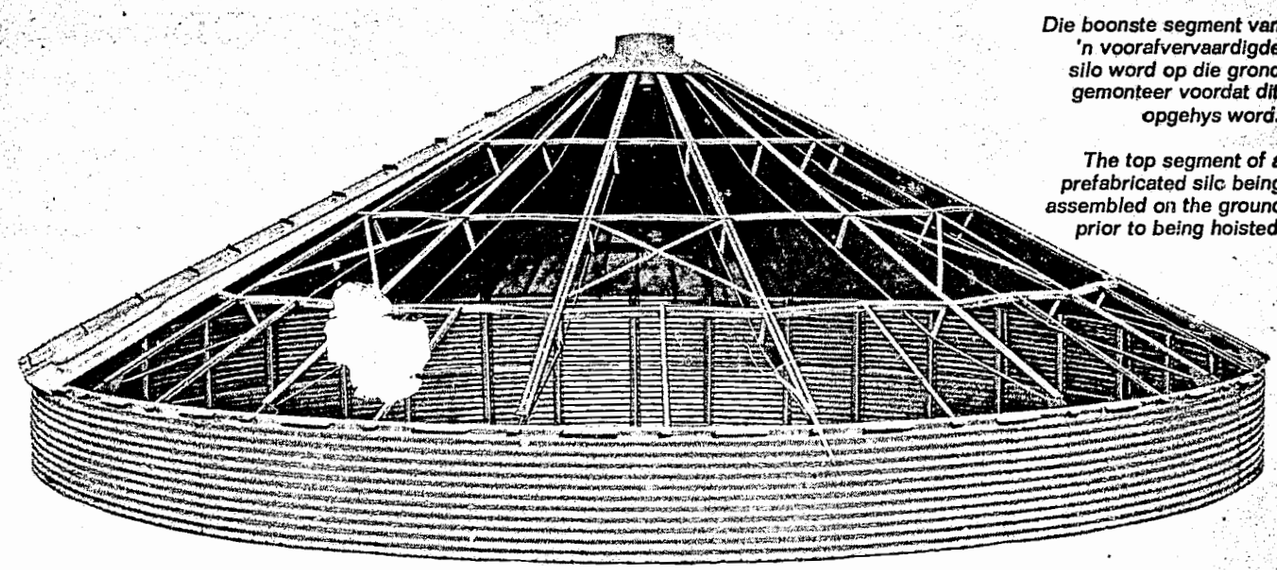
Tipiese silo's wat deur Bessemer op 'n plaas opgerig is. Elke silo het 'n vermoë van 2 000 sak en hulle is gewild onder die boere.

Typical silo's erected by Bessemer on a farm. Each silo has a capacity of 2 000 bags and they are popular with farmers.



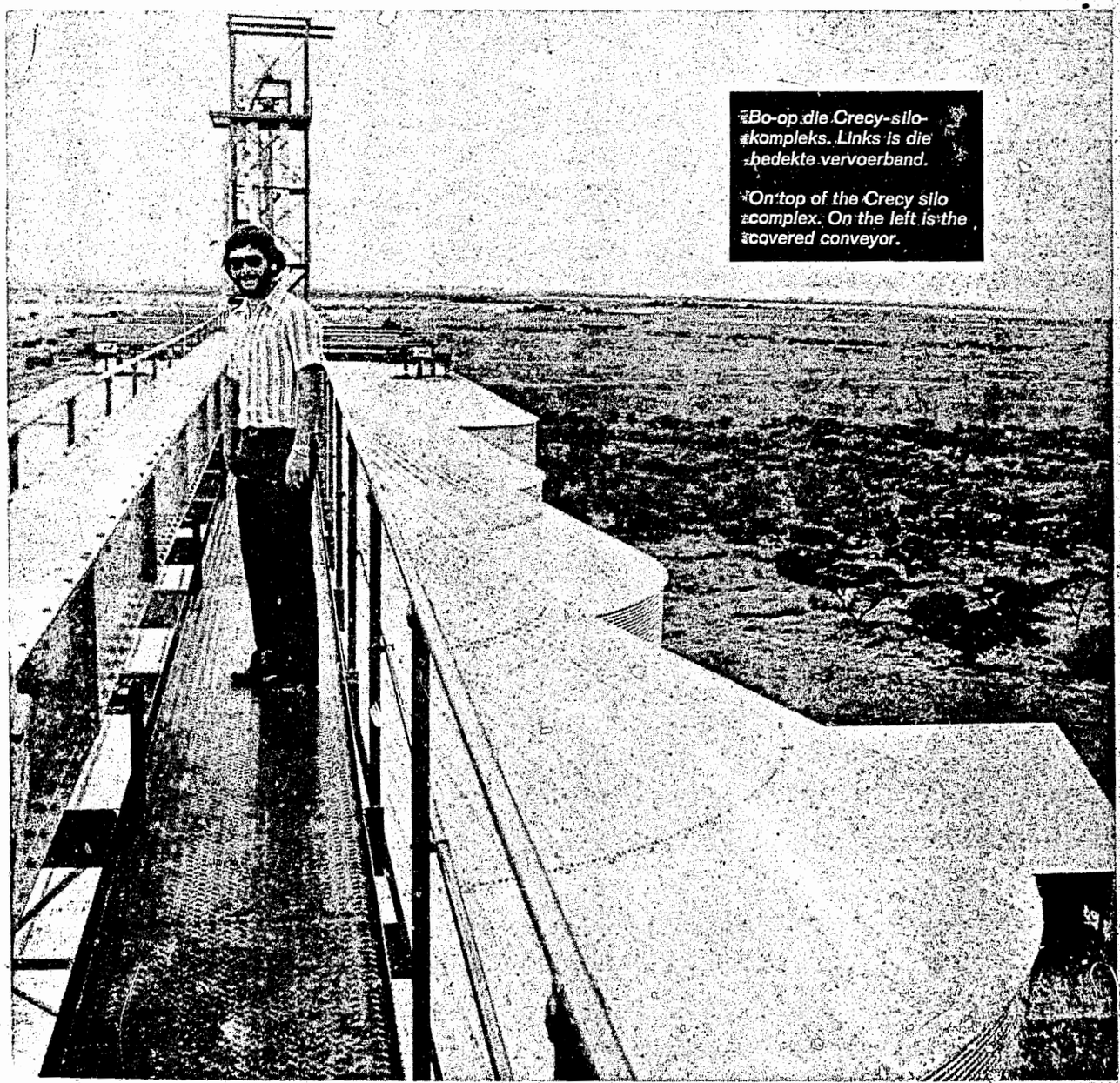
Die elektroniese beheerpaneel van die Crecy-kompleks.

The electronic control panel of the Crecy complex.



Die boonste segment van 'n voorafvervaardigde silo word op die grond gemonteer voordat dit opgehys word.

The top segment of a prefabricated silo being assembled on the ground prior to being hoisted.



Bo-op die Crecy-silo-kompleks. Links is die bedekte vervoerband.

On top of the Crecy silo complex. On the left is the covered conveyor.

nywerhede (Edms) Bpk, van Randfontein. Die graansilo sal 'n wandhoogte van 43,2 m hê en 20 m in deursnee wees. Vir die oprig van die buis alleen sal 170 ton staal benodig word, en sy vermoë sal op 10 750 ton, of 120 000 sak, te staan kom. Die silo is van die gesweiste tipe.

Voorbeelde van Bessemer se grootmaatsilo's is in verskillende dele van die land te sien. Van hulle staan by Roedtan, Nutfield, Settlers, Mosselbaai, Koperfontein, Moorreesburg, Darling, Malmesbury, Harrismith en Butterworth, om slegs 'n aantal te noem. In 1974 het die maatskappy silo's in Zambië en in 1976 in Malawi opgerig.

Nie net grootmaatsilo's word verskaf nie, maar daar is ook kleineres spesiaal vir meulenaars en boere. Een tipe staan selfs as die boere-silo bekend en daar word al hoe meer van klein opgaarsilo's op plase gebruik gemaak om graan in losmaat te hanteer.

Die maatskappy probeer steeds uitvoer, en 'n woordvoerder sê daar is kwaai mededinging tussen Suid-Afrikaanse ondernemings in die uitvoermark vir staalstrukture. Suid-Afrikaanse firmas tender dikwels teen mekaar in die buiteland.

Bessemer Staalkonstruksie (Edms) Bpk is in 1952 gestig, hoofsaaklik om die landboubedryf te bedien, en tans maak die onderneming daarop aanspraak dat hy die leier geword het op die gebied van ontwerp, vervaardiging en oprigting van staalsilo's vir die goedkoper en makliker opberging van losmaatgraan. 'n Ooreenkoms om staalsilo's kragtens lisensie in Suid-Afrika te vervaardig, is in 1967 met Trico Industries Incorporated, van die VSA, gesluit. Die Crecy-kompleks is gebou volgens die Trico-beginsel, maar is heelwat groter as wat Trico reeds gebou het en dis deur Bessemer in so 'n mate verander dat Trico self daardeur verras is. Dit was die eerste keer dat Bessemer van spesiale staal gebruik gemaak het vir die oprigting van silo's.

Die maatskappy beskik oor 'n uitgebreide tegniese afdeling met al die nodige ondervinding en vakkundigheid, en alle komplekse word deur eie tegnici ontwerp en vervaardig. Slegs die beste gehalte staal, wat aan die spesifikasies van die Suid-Afrikaanse Buro vir Standaarde voldoen, word gebruik. Toetsgeriewe van die Wetenskaplike en Nywerheidnavorsingsraad word dikwels gebruik om beter silo's te ontwerp.

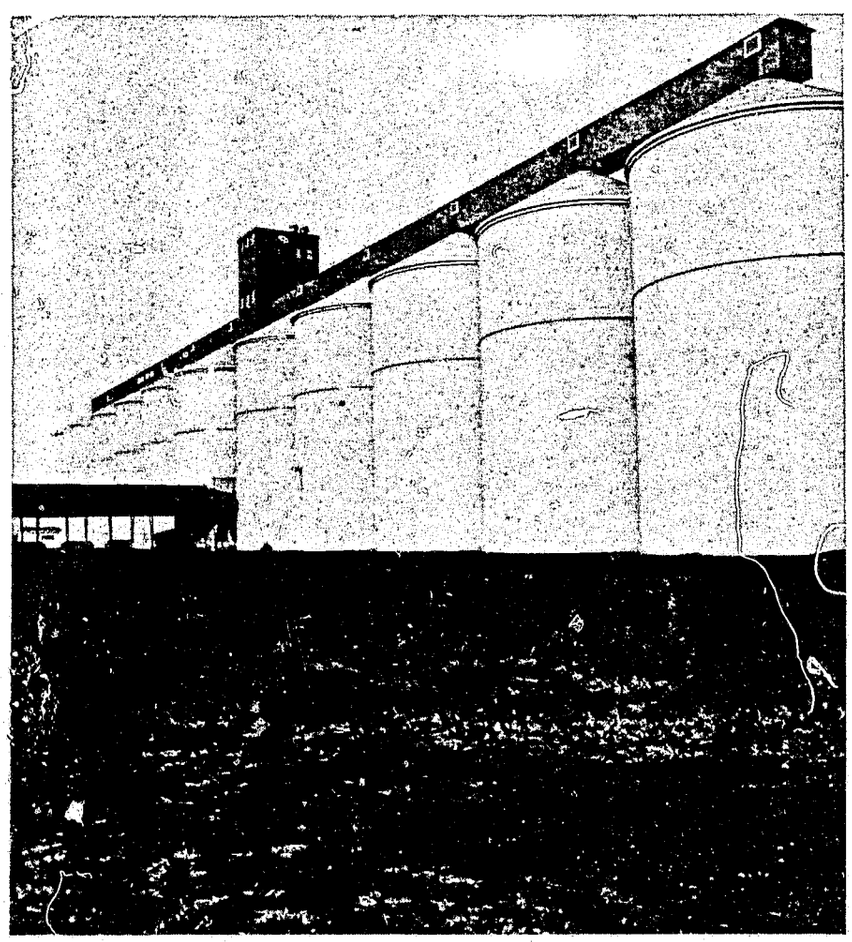
Die maatskappy maak daarop aanspraak dat sy silo's vinnig opgerig kan word, nie kraak nie en waterdig en rotvry is. Daarby bied die voorafvervaardigde tipe die laagste opbergkoste per ton. Bestaande komplekse kan maklik gewysig, uitgebrei of afgebreek en elders heropgerig word.

Briefly

ALTOGETHER 724 tons of corrugated, galvanized high-quality steel, specially produced by Iscor, was used to erect the 12 tanks of South Africa's largest steel grain silo complex of R1,3 million at Crecy. An additional 98 tons of Iscor steel was used for the erection of the tower, store rooms, workshops and cargo area. The complex was built for the Noord-Transvaalse Koöperasie Bpk by Bessemer Steel Construction (Pty) Ltd to cope with the "wheat explosion" on the Springbok Flats. Eight of the silos have a wall height of 23,6 m and a diameter of 18,1 m, whilst the measurements for the other four are 24,4 and 9,1 m, respectively.

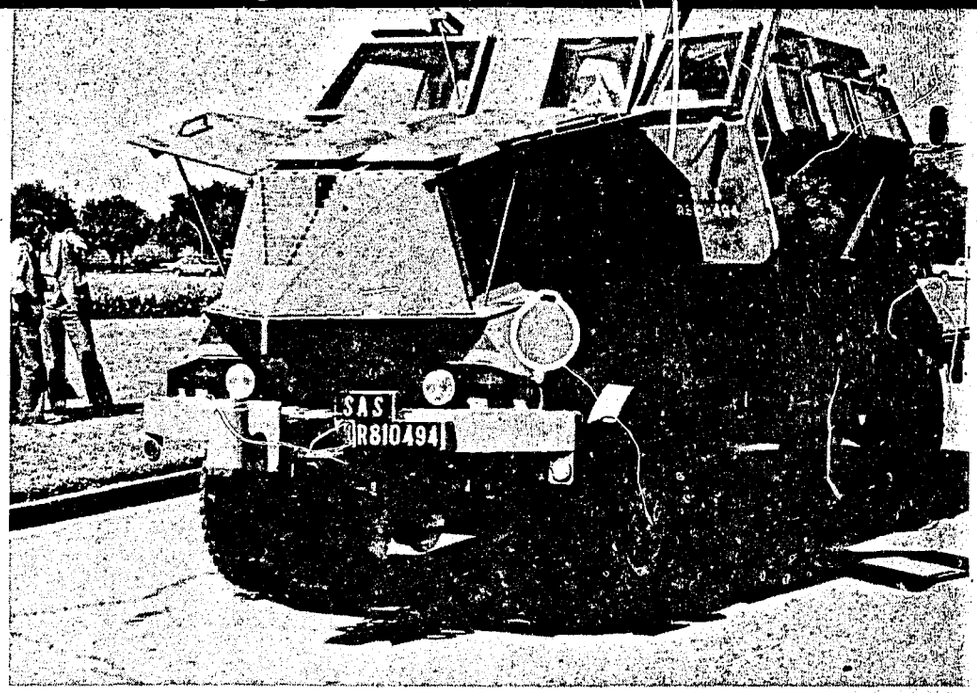
'n Voorbeeld van gesweiste silo's wat deur Bessemer opgerig is.

An example of welded silo's erected by Bessemer.



Die prototipe-pantserkar Chris toe dit onlangs op Esselenpark vertoon is. Die vervaardigingsmateriaal is hoofsaaklik Yskor-staal.

The prototype armoured car Chris when it was recently exhibited at Esselenpark. The manufacturing material is mainly Iscor steel.



SAS kry tande

DIE GEPANTSERDE patrollievoertuig wat volgens 'n onlangse aankondiging deur die Suid-Afrikaanse Spoorweë ontwikkel is vir gebruik deur die Spoorwegpolisie as onluste sou voorkom, word volgens mededeling deur die Spoorweë hoofsaaklik uit Yskor-staal vervaardig. Nadere besonderhede, soos die tipes staal en die massa, is nie bekend gemaak nie.

Volgens die aankondiging deur dr. J. G. H. (Kobus) Loubser, Hoofbestuurder van die Spoorweë, is die voertuig — wat plaaslik ontwerp en gebou is — uniek in dié opsig dat dit op sowel paaie as treinspore kan ry.

Luidens die verklaring het dit gedurende onluste die afgelope twee jaar geblyk dat treine oproeriges van 'n goeie aanvalsteiken voorsien. Vanweë die algemene toeganklikheid van spoorbane en die feit dat 'n relatief klein sabotasiedaad groot skade kan veroorsaak, het dit noodsaaklik geword om spoorbane gereeld en intensief te patrolleer.

Twee prototipe-pantserkarre, genaamd Kobus en Chris, is op Esselenpark aan senior Spoorwegpolisie-offisiere gedemonstreer. Die voertuie is koeëlvas, spesiaal ontwerp om landmynontploffings te weerstaan en kan selfs vir die opsporing van landmyne gebruik word.

Die pantserkarre is onder leiding van mnr. C. J. (Chris) van der Merwe, werkbestuurder van die Spoorweë op Langlaagte, ontwerp en gebou. Sowat 6 800 onderdele is in die werkwinkel vir die twee voertuie ontwerp en vervaardig.

Die pantserkarre word deur sessilinder-dieselenjins aangedryf en hul veerstelsel is ontwerp om selfs die swakste paaie aan te durf. Hulle kan snelhede van meer as 60 km/h behaal en kan 1 000 km per spoor of 750 km per pad met een tenk brandstof aflê.

Die twee prototipes ondergaan nog allerlei toetse om hul ontwerp te vervolmaak, waarna soortgelyke voertuie oral gebruik sal word „waar dit nodig sou blyk". Dit is nie bekend hoeveel van die voertuie uiteindelik vervaardig sal word nie.

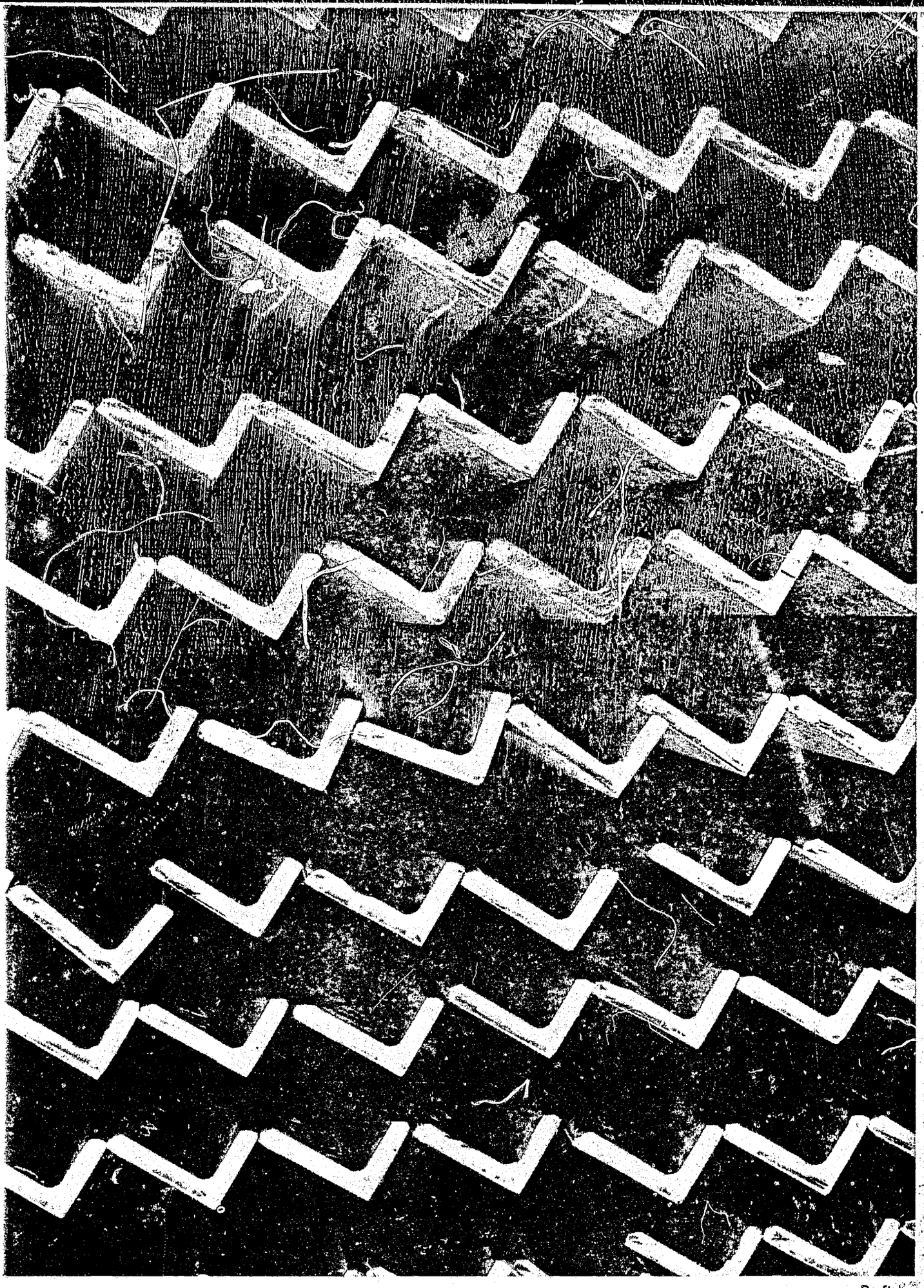
Die pantserkar Kobus.

The armoured car Kobus.

Kortliks

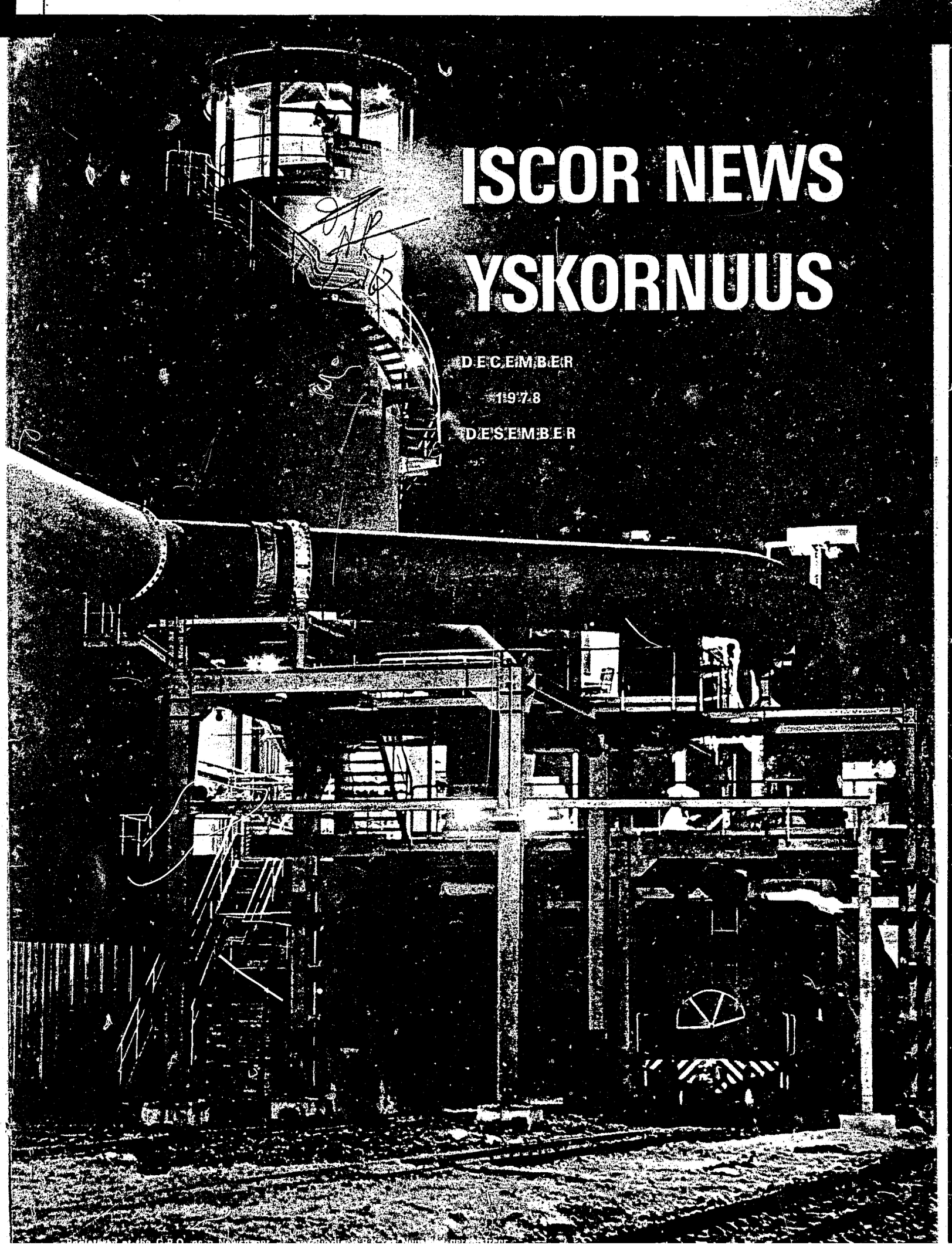
THE ARMOURED patrol vehicle which, according to a recent statement, had been developed by the South African Railways for use by the Railway Police in the event of disturbances, was manufactured mainly from Iscor steel, according to information supplied by the Railways. The types of steel and the mass were not disclosed.

The two prototypes shown to senior police officers are still being subjected to tests to perfect the design, after which identical vehicles will be used "where it seems necessary". It is not known how many of the vehicles will be manufactured.



Profiele

Gedruk deur Perskor, Doornfontein, Johannesburg



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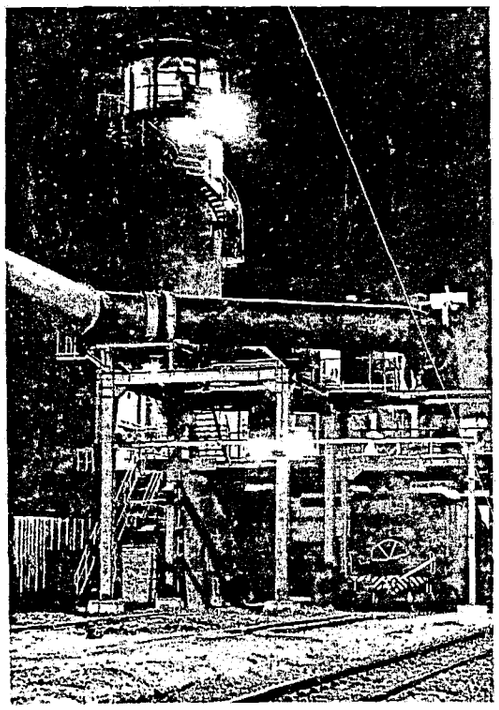

Cover

The desulphurization plant for the treatment of blast furnace hot metal at the Newcastle Works.

Voorblad

Die ontswaelingsaanleg vir die behandeling van hoogoond-vloeimetaal by die Newcastle-werke.

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DIE TYDSKRIF VAN DIE SUID-AFRIKAANSE YSTER EN STAAL INDUSTRIËLE KORPORASIE, BEPERK

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DITHOLONG — „die plek van die koedoes": dit is die naam van die opleidingsentrum vir Swart werknemers by Yskor se Grootegeluk-steenkoolmyn in die Noordwes-Transvaalse Bosveld. Waar koedoes inderdaad nog enkele jare gelede in die ongerepte natuur hul gang gegaan het, staan tans 'n gebou waar vir Swartes nuwe geleenthede geskep word deur die opleiding wat hulle daar ontvang.

Die Swart arbeid wat deur die myn benodig word, word uit die omliggende, betreklik afgeleë plattelandse gebied getrek waar daar, afgesien van enkele skole, geen opleidingsgeriewe vir Swartes bestaan nie. Yskor moes dus in ooreenstemming met sy behoeftes self die nodige opleiding verskaf toe hy met die ontwikkeling van die myn in daardie geweste begin het. Dit is hoe Ditholong tot stand gekom het. Die opleiding wat verskaf word, is nie alleen noodsaaklik vir en tot voordeel van die Korporasie self nie, maar ook die Swartes baat daarby, aangesien hulle die kans gebied word om hulle vir beter werkgeleenthede te bekwaam.

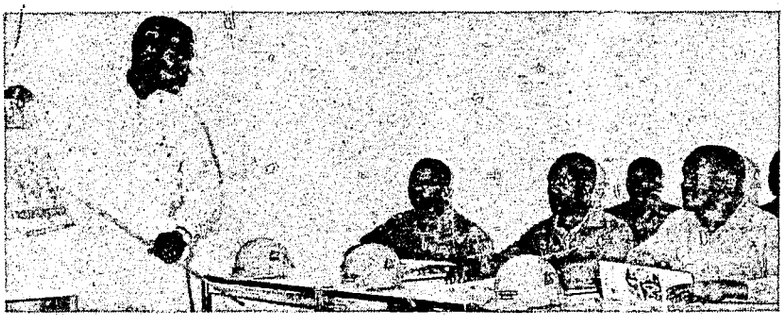
'n Groot deel van die werk wat by Ditholong gedoen word, behels die opleiding van operateurs van mynboutoerusting. Hierdie toerusting bestaan onder meer uit Terex-vragwaens van 150 ton, asook die kleiner tipe Wabco-vragwaens, laaigrawe, vooremmerlaaiers en stoot- en padskrapers. Tydens die konstruksiefase word ook 'n hele aantal gewone wipbakvragmotors gebruik. Bestuurders van hierdie voertuie ontvang ook opleiding — al beskik hulle oor 'n swaarvoertuig-rybewys wanneer hulle by Yskor in diens tree. Hierbenewens word operateurs van vurkhefwaens, hyskrane, padrollers en busse wat deur die Diensteseksie gebruik word, ook opgelei. Selfs stoomketelbedieners kry die nodige onderrig.

Voordat 'n kandidaat vir opleiding aanvaar word, word hy streng gekeur. 'n Basiese vereiste wat gestel word, is dat die persoon moet kan lees en skryf. Daarbenewens moet 'n kandidaat 'n voorafbepaalde minimum persentasie behaal in die psigomotoriese toetse, wat uit oog - hand - voet - koördinasietoetse bestaan en deel van die keuringsproses uitmaak. Korporasiewyd is 'n minimum van 55 persent bepaal as norm vir toelating tot operateursopleiding.

By Grootegeluk is egter gevind dat die Swartes van die omgewing

'n Groep instrukteurs geseis oor 'n koppie tee in hul eie tee-kamer.

A group of instructors chatting over a cup of tea in their own tea-room.



Mnr. Jonas Seefane, 'n instrukteur, besig met formele klaskameronderrig aan 'n groep leerling-Terex-operateurs.

Mr. Jonas Seefane, an instructor, busy with formal class-room tuition to a group of learner Terex operators.

besonder hoë resultate in die psigomotoriese toetse behaal. Derhalwe het die sentrum sy eie norms bepaal vir die verskillende operateurskategorieë. So, byvoorbeeld, word 80 persent vereis vir operateurs van P & H 2300-laaigrawe en 'n minimum van 70 persent vir Terex-operateurs. Die hoë toelatingsvereistes wat gestel word, is moontlik een van die redes waarom die ongeluksyfer by Grootegeluk so laag is en ongelukke wat wel voorkom, nie ernstig is nie.

Wanneer 'n aspirant-operateur aan die toelatingsvereistes voldoen het, ondergaan hy opleiding volgens 'n program wat oor die algemeen soos volg daar uitsien: Aanvanklik ry hy vir 'n dag of twee saam met 'n ervare operateur om die „gevoel" van die betrokke masjien of voertuig te kry. Hierna ontvang hy teoretiese opleiding, gevolg deur praktiese onderrig onder toesig van 'n instrukteur en, laastens, verdere praktiese opleiding waartydens hy self die kontroles oorneem, maar nog steeds onder die waakende oog van 'n ervare operateur. Eers wanneer hy bewys gelewer het dat hy ten volle vertroud is met die betrokke toerusting, word hy toegelaat om alleen as volwaardige operateur op te tree. Opleiding hou egter nie hier op nie, want operateurs moet periodiek opknappingskursusse bywoon. Toerusting hoef selde vir opleidingsdoeleindes aan diens onttrek te word.

Ditholong beskik egter ook oor twee simuleerders, onderskeidelik van die Terex- en Wabco-vragwaens, wat noodsaaklike hulpmiddels geword het vir die opleiding van operateurs van hierdie voertuie. Die simuleerders word ook gebruik in die opknappingskursusse van reeds gekwalifiseerde operateurs. Die Wabco-simuleerder is voorheen op Sishen gebruik terwyl dié van die Terex 'n nuwe, gesofistikeerde eenheid is wat deur Opvoedkundige Tegnologie in Pretoria gebou en onlangs deur Grootegeluk in gebruik geneem is. 'n Kenmerk van operateursopleiding is dat daar deurgaans besondere klem op veiligheid gelê word.

Benewens die opleiding van operateurs, ontvang lede van die Swart skakelkomitee en stamverteenwoordigers (voorheen kampongpolisie genoem) ook onderrig by Ditholong. Skakelkomiteelede word touwys gemaak in vergaderingprosedures. Voorts word lede geleer presies wat hul funksie is — dat hulle as spreekbuis moet dien tussen hul mense en Yskor-bestuur en omgekeerd. Hulle moet, met ander woorde, as tweerigting-kommunikasiekanaal optree.

Wat die stamverteenwoordigers by die hostel betref, word daar gepoog om weg te kom van die idee dat hierdie mense konstabels of polisiemanne is. Trouens, die stamverteenwoordigers dra nie eens

Briefly

DITHOLONG — the place of the kudus — is the name of the training centre for Black employees at Iscor's youngest mining centre, Grootegeluk, in the north-western Transvaal Bushveld. Here new job opportunities are created for Blacks through the training offered to them.

The major part of the work done at Ditholong consists of the training of various categories of operators, including those for the giant Terex trucks and P & H 2300 shovels. Training courses are also offered for members of the Black liaison committee and tribal representatives (formerly known as compound policemen), whilst new employees are familiarized with conditions at the mine by means of induction courses.

On account of representations made by Black employees, evening classes are conducted, in collaboration with the Government Department of Education and Training, to teach illiterate Blacks to read and write.

meer 'n uniform nie. Hul vernaamste taak bly egter nog steeds die handhawing van dissipline onder hostelbewoners. Dit is juis in hierdie opsig dat hulle opleiding ontvang. Hulle word onder meer geleer hoe om in probleemsituasies op te tree en wat van hulle verwag word, byvoorbeeld met wie hulle in verbinding moet tree as daar probleme by die hostel ontstaan. Tydens dissiplinêre ondersoeke is hulle ook teenwoordig om, waar nodig, as tolke op te tree of met die handhawing van orde behulpsaam te wees.

Tans het die hostel sowat 500 inwoners, maar namate die eerste ontwikkelingsfase van die myn vorder, sal die getal aangroei tot ongeveer 1 200. Dat die stelsel van stamverteenwoordigers goed werk, word bewys deur die feit dat gedurende die afgelope drie jaar slegs een geringe aanrandingsaak te berde gebring is. Die dissipline in die hostel is dus puik.

Opleiding van 'n meer algemene aard word ook by Ditholong verskaf, met twee induksieprogramme wat aangebied word. Nuwe werknemers word as 't ware aan die myn bekend gestel sodat hulle gou met plaaslike toestande vertroud kan raak. Daarbenewens word daar ook 'n woonstel-oriënteringskursus aangebied. Die doel hiermee is om nuwe hostelbewoners te leer hoe om van die moderne geriewe waaraan hulle nie gewoond is nie, gebruik te maak. Dit dra veel daartoe by om nuwe werknemers gou in te burger.

Die stadium is bereik waar Swartes van ander Yskor-sentrums ook by Ditholong opgelei kan word. So is daar reeds 'n aantal operateurs vir Glen Douglas en boor-, stootskraper- en padskraper-operateurs vir Thabazimbi opgelei. Grootegeluk kon die ander sentrums in hierdie opsig help omdat die betrokke toerusting reeds by hierdie sentrum in gebruik is, terwyl Glen Douglas en Thabazimbi nou eers besig is om die masjinerie aan te skaf.

Wat administratiewe opleiding betref, is dit tans nog hoofsaaklik daarop gemik om onderrig aan klerklike personeel te verskaf wat aanvullend tot hul skoolopleiding sal wees en hulle sodoende beter vir hul werk by Yskor sal toerus. Die bykomende onderrig sal veral toegespits wees op vakke soos Rekeningkunde en Wiskunde.

Na aanleiding van versoeke deur Swart werknemers wat nog geen skoolopleiding gehad het nie, word daar tans met die Staatsdepartement van Onderwys en Opleiding onderhandel met die oog daarop om 'n aandskool te begin waar Swartes geleer sal word om te lees en te skryf. Hierdie aandskool kan in die toekoms verder uitgebrei word.

Die opleidingsentrum is teen betreklik geringe koste daargestel omdat dit nie nodig was om 'n nuwe gebou vir hierdie doel op te rig nie. 'n Bestaande gebou, wat oorspronklik as werkwinkel gedien het vir die kontrakteur wat die deklaagstroping by die myn onderneem het, is na voltooiing van die kontrak deur die Korporasie oorgeneem. Met die hulp van vakleerlinge van die Pretoriase Vakopleidingsentrum en personeel van Konstruksie, Grootegeluk, is 'n bykomende verdieping ingebou en ander noodsaaklike geriewe aangebring. Deurdat die werk hieraan verbonde deur Yskor se eie personeel gedoen is, is verdere kostebesparing teweeggebring.

Tans is daar twee lesinglokale vir groter groepe en vyf klaskamers vir kleiner groepe. Benewens 'n teekamer wat vir die Swart instrukteurs ingerig is — iets waarop hulle baie trots is — is daar 'n kantoor vir die Blanke bedryfsopleidingsbeampte en 'n lokaal waar die twee simuleerders gehuisves word. Die Swartes is baie in hul skik met die geriewe wat vir hulle geskep is en het groot waardering daarvoor. Aanvanklik is opleiding onder 'n koelteboom, met die swartbord teen die boomstam, aangebied!

Aan die hoof van die sentrum staan mnr. J. C. Venter, Bedryfsopleidingsbeampte, bygestaan deur drie Swart instrukteurs, terwyl 'n verdere twee tans as instrukteurs opgelei word.

Mnr. J. C. (Jakkie) Venter (links), Bedryfsopleidingsbeampte, kyk toe terwyl die instrukteur, mnr. Reginald Mogothlane (middel), besig is om sy leerling, mnr. William Mosima, op die Wabco-simuleerder touwys te maak.

Mr. J. C. (Jakkie) Venter (left), Industrial Training Officer, looks on while the instructor, Mr. Reginald Mogothlane (centre), is training his pupil, Mr. William Mosima, on the Wabco simulator.

500 km of shelving

WHEN THE newest Pick-'n-Pay hypermarket, claimed to be one of the largest in the world, opened its doors to the public recently at The Gardens, Johannesburg, shoppers could select from goods displayed on an estimated 500 km of shelving —more than the distance from Pretoria to Bloemfontein. The manufacture and installation of shelving and shopfittings for this project were completed within less than three months by the Johannesburg firm of Tharmarq (Pty) Limited. About 600 tons of Iscor steel were used for the contract.

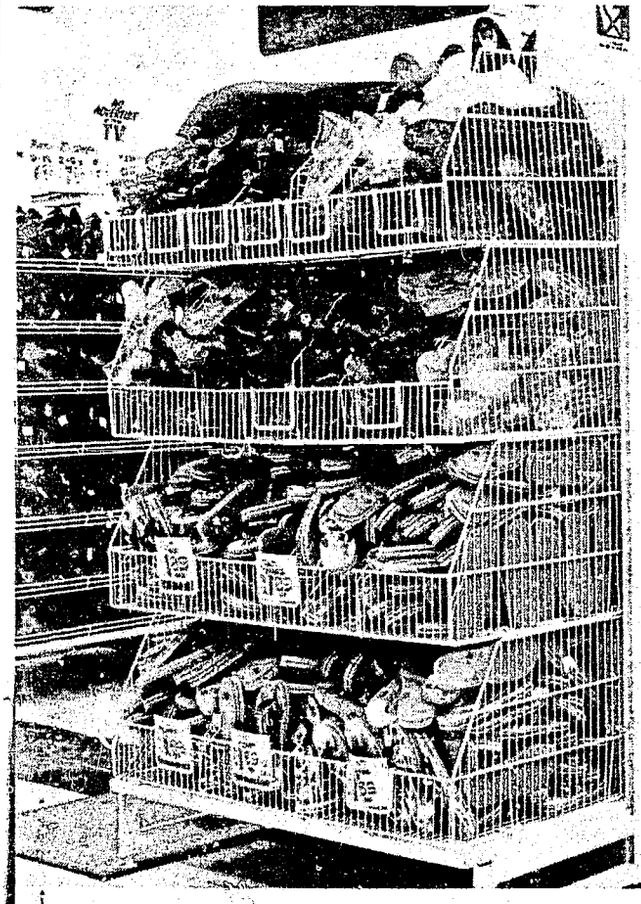
Tharmarq will also make history when its products are installed in its first supermarket to open in a Black township, which will come into operation shortly at Sebokeng.

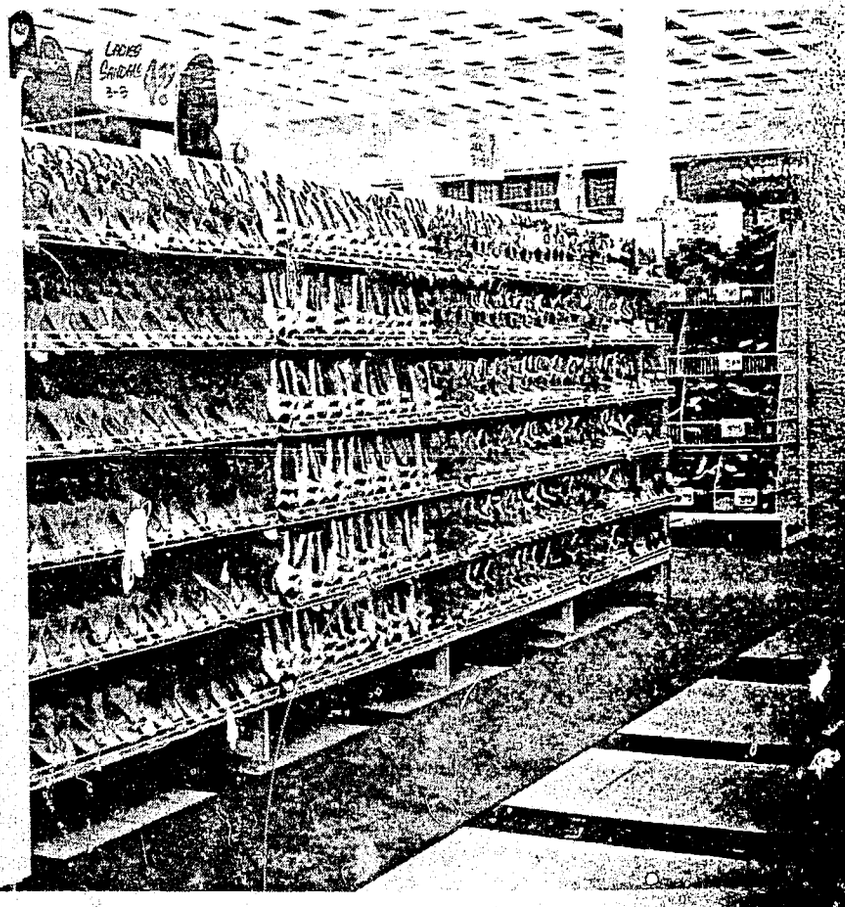
The Gardens hypermarket installation was the fifth successfully carried out by Tharmarq. Others are at Boksburg, Brackenfell, Durban and Bloemfontein. Equipment has also been installed in Pick-'n-Pay supermarkets and warehouses.

Planning a hypermarket begins with the shopfitting layout for the shop floor and back-up warehous-

A scene in the well-equipped tool shop — heart of the Tharmarq factory which produces thousands of kilometres of steel shelving.

'n Toneel in Tharmarq se goed toegeruste gereedskapwinkel — hart van die fabriek wat duisende kilometer staalrakke lewer.





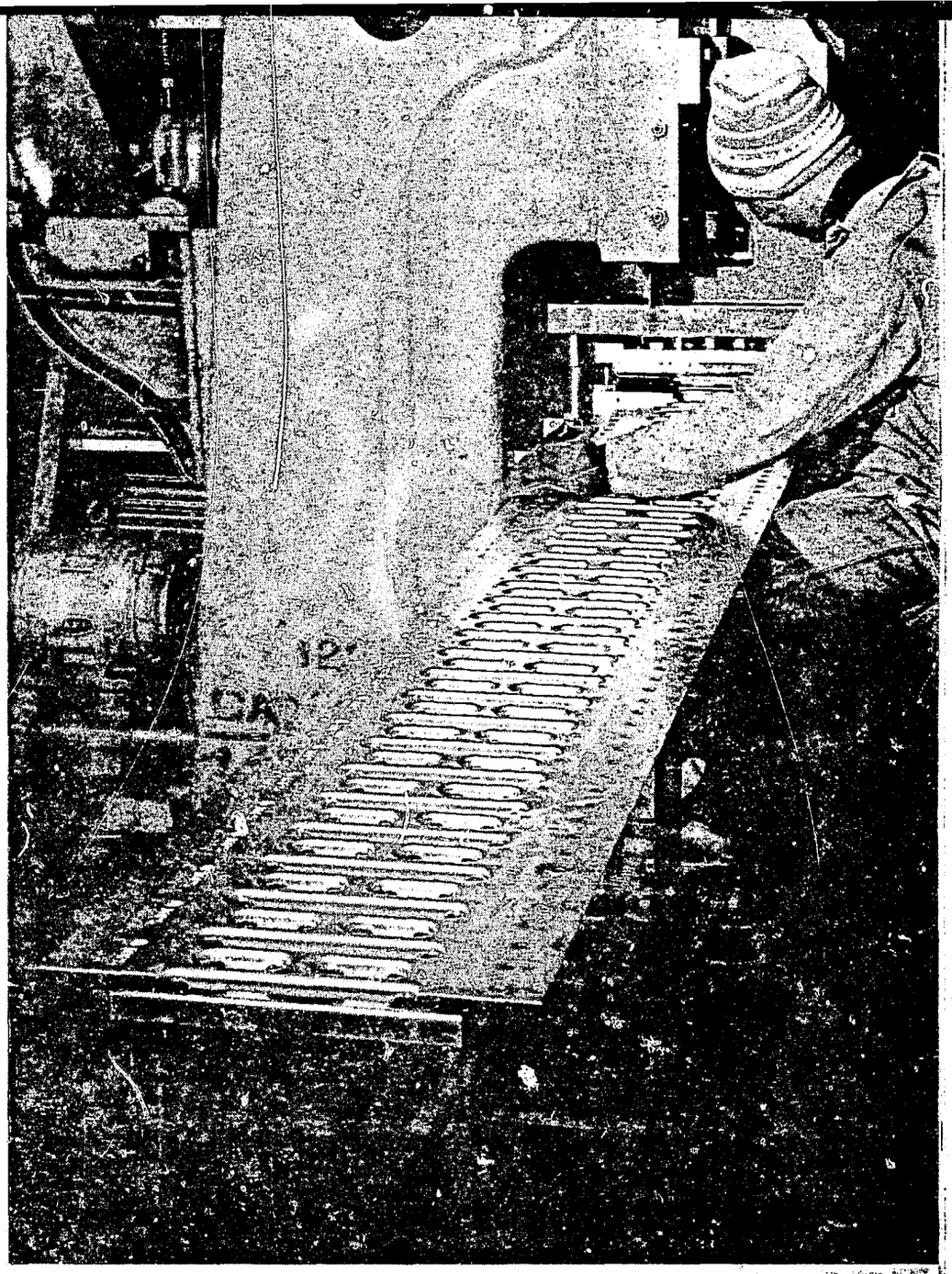
A corner of a Pick-'n-Pay hypermarket. The photo shows the various st... shelving systems and fittings manufactured by Tharmarq (Pty) Limit...

'n Hoekie van 'n Pick-'n-Pay-hipermark. Die foto toon die verskillende r... stelsels en toebehore van staal wat deur Tharmarq (Edms) Bp... vervaardig w...

ing. A hypermarket is designed to be self-contained, with sufficient warehousing and shelf space to hold the required stock and reserves. A supermarket, because of the space restrictions usually imposed by the space available at the shopping complex where it is situated, draws stocks from a separate w" house. Tharmarq has therefore been involved from the beginning of each new hypermarket project and has worked in close collaboration with the developer throughout the planning stage. The aim is efficient materials handling and storage and the attractive display of merchandise.

Food products occupy about 30 per cent of the floor space of a hypermarket and yield about 70 per cent of the turnover. Shoppers who buy food also see attractively displayed hardware, clothing, sports goods and other items.

Planning includes production schedules for the manufacture of about 20 types of racking and shelving. Various sections, rolled from Iscor steel sheet by Brollo Africa (Pty) Limited and Robor Limited,



Patented floor panels being manufactured at Tharmarq's factory in Johannesburg.

Gepatenteerde vloerpanele word by Tharmarq se fabriek in Johannesburg vervaardig.

Components for television sets being manufactured at Tharmarq's factory.

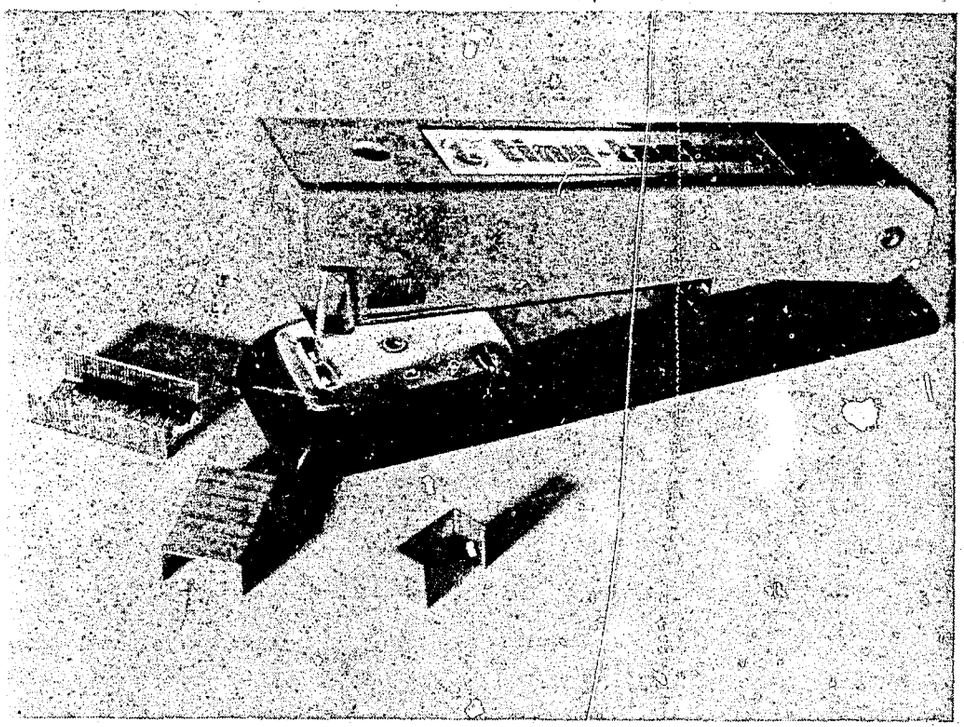
Onderdele vir televisiestel" word by Tharmarq se fabriek vervaardig.

Kortliks

RAKKE met 'n totale lengte van 500 km is deur Tharmarq (Edms) Beperk vervaardig en by Pick-'n-Pay se nuutste hipermark in Johannesburg geïnstalleer. Nagenoeg 500 ton Yskor-staal is vir die projek gebruik en installering is binne drie maande voltooi. Dit is die vyfde Pick-'n-Pay-hipermark wat deur Tharmarq met rakke toegerus is.

Tharmarq-produkte sal ook gebruik word in sy eerste supermark wat in 'n Swart stadsgebied geopen sal word.

Tharmarq se goed toegeruste gereedskap- en perswinkels onderneem werk vir ander klante en het onlangs 'n krammer begin lewer wat glo die eerste is wat in Suid-Afrika vervaardig word. Die „tiny-tacker" word deur Tharmarq bemark.



The "tiny-tacker" stapler — believed to be the first to be manufactured in South Africa.

Die „tiny-tacker"-krammer — glo die eerste wat in Suid-Afrika vervaardig word.

are used for the production of these components which include gondola ends, shelves, support brackets, infill panels, baskets, utility bars, beams and end frames.

Ezee-Lok heavy-duty racking, Tharfix and the more recently developed Tinyrac light-duty, bolt-less shelving have been designed by Tharmarq to store and display the wide variety of merchandise sold by hypermarkets. The Tinyrac system is versatile. End frames are made in various depths and heights, and shelves can be quickly attached and configurations easily varied according to requirements. Heavy steel bases are made for the bulk storage of items such as soap and sugar.

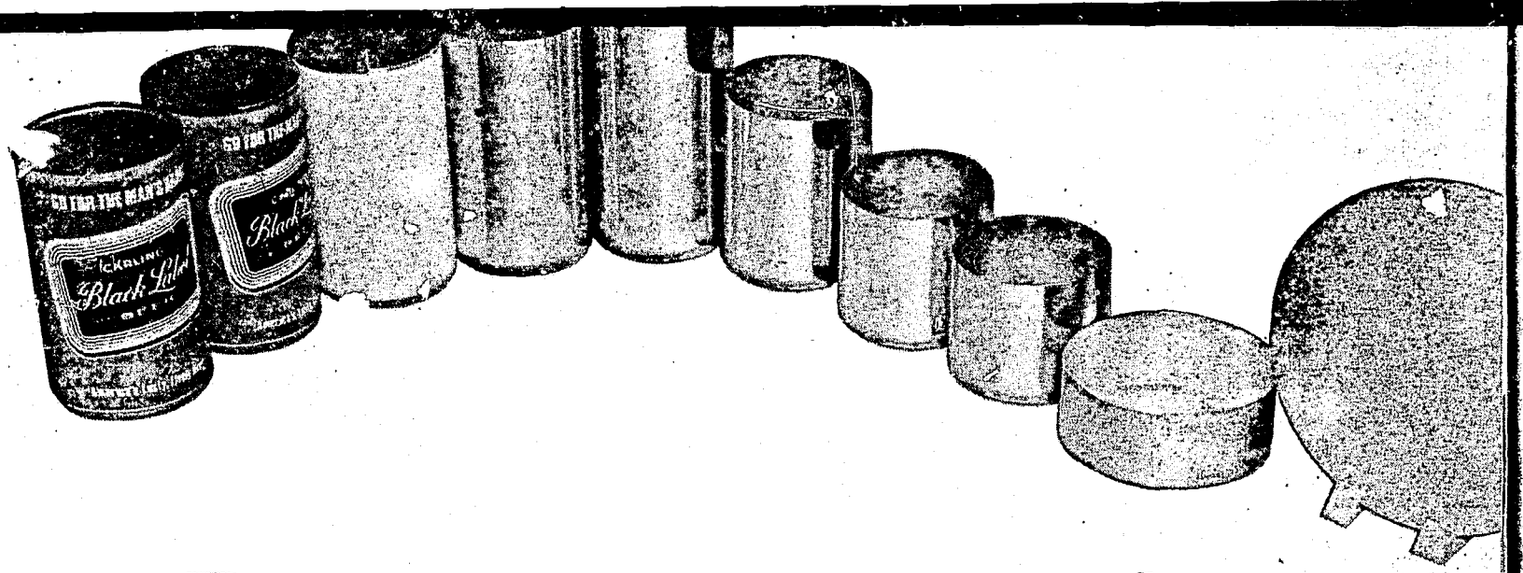
These systems are also used for back-up or reserve warehouse areas. Tharmarq has also developed and patented a pressed steel flooring panel for use in these areas. The panels are laid on a section framework to build a mezzanine floor which can double available floor area.

Tharmarq's association with Pick-'n-Pay's rapid expansion in the supermarket and hypermarket field has utilized a major portion of its production capacity. With the slowing of the rate of expansion, Tharmarq has broadened its marketing effort to concentrate more on the industrial sector, aiming to provide complete materials handling and storage systems and a planning consultancy. Mr. Stan Wrigley, marketing director, explains that this service can be particularly valuable to the architects of a proposed industrial undertaking or expansion project.

Although the major portion of Tharmarq's output is steel shelving, wood shelving is preferred for some applications. For libraries the company markets a wooden shelving system designed overseas and manufactured under licence. Another wooden product is furniture for hospitals.

At the heart of Tharmarq's manufacturing operations is a well-equipped precision tool and die-making shop which undertakes jobbing orders and precision and mass production turning. Manufacturing capacity is also employed for the production of components such as for the armaments, radio and television industries.

When investigating manufacturing possibilities for exploiting its tooling expertise, Tharmarq discovered that office staplers sold in the Republic were all imported. Investigation suggested that the market for a small stapler would be in the region of 120 000 a year and that the product was well with the capabilities of the tool and press shops. The "tiny-tacker", claimed to be the first office stapler wholly manufactured in South Africa, is now being sold at stationery outlets. Its competitive price promises success in export markets and this possibility is being investigated. A staple remover and smaller and larger staplers — the latter is in the tooling stage — are being developed.



Deep draw steel for new can

Various stages in the manufacture of a two-piece can — from the blank on the right, through drawing, ironing, trimming, printing and flanging.

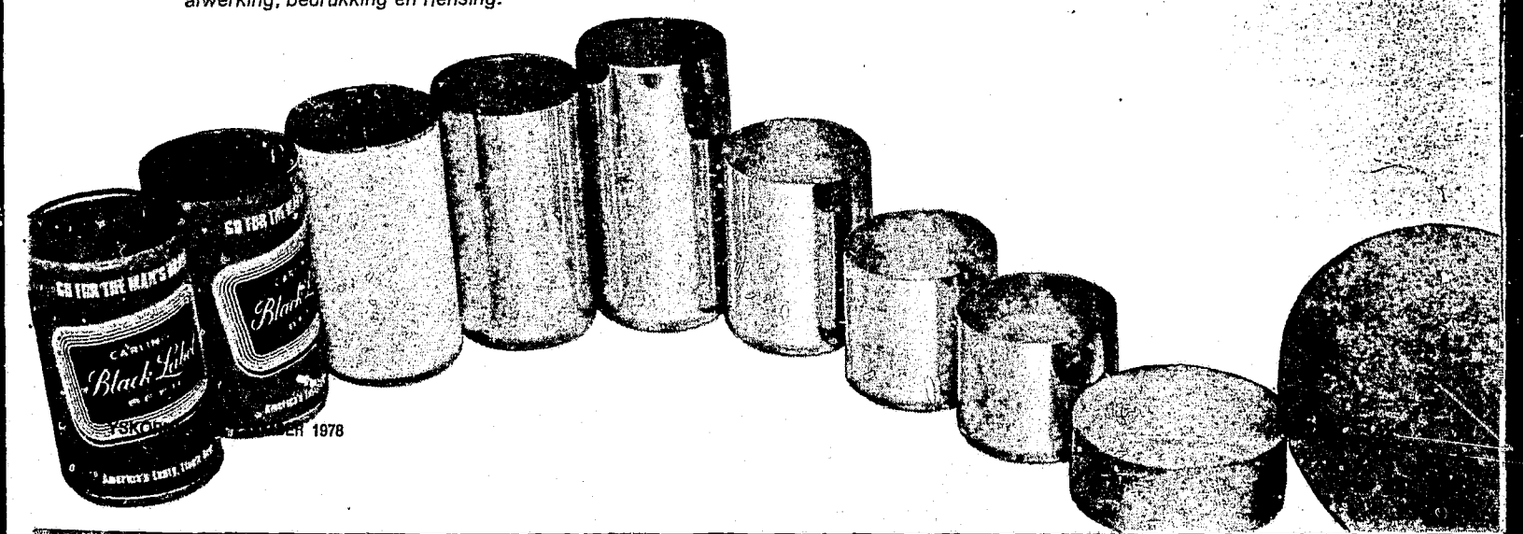
CLOSE CO-OPERATION between Iscor and a customer has led to the local production of a special type of steel which will save the country approximately R4,3 million a year in foreign currency and the quality of which has gained the Corporation high praise in the USA. This steel, which is of deep-drawing quality, is supplied to Metal Box SA Ltd in the form of tinplate for the manufacture of two-piece cans, known as DWI (drawn and wall ironed) cans, at its Rosslyn factory.

The manufacture of these cans — used for beverages — is a relatively recent development in the USA. In this process a circular blank is cut from tinplate, formed into a shallow cup by a die, and then thinned into final dimensions by being forced through a series of progressively narrowing ironing rings. After this only a top is needed to close it. To deform the steel sheet in this way requires a special type of deep-drawing quality tinplate. Previously only three-piece cans were manufactured, requiring ordinary tinplate. The body was formed from a rectangular piece of tinplate and the bottom and lid were added at later stages.

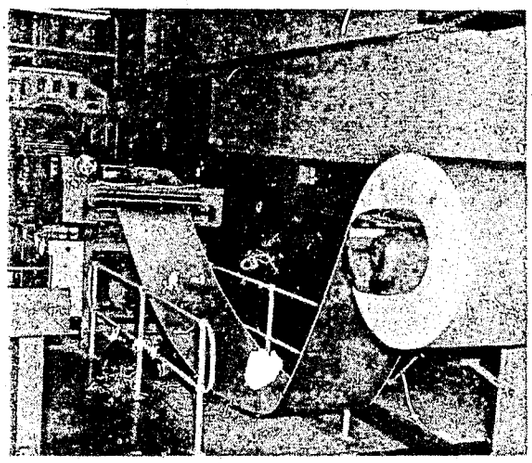
Metal Box commenced production of two-piece cans at Rosslyn during the second half of 1976, using imported tinplate, as no suitable local material was available. The manufacture of DWI steel cans not only requires a higher quality tinplate than that needed for three-piece cans, but thickness variations must be kept at a minimum to control both cup and shell height. Non-metallic inclusions must also be controlled because the drawing and ironing processes bring any impurities closer to the surface as the thickness is reduced.

Iscor was approached to develop

Verskillende stadiums in die vervaardiging van 'n tweestukblik — van die ru-stuk aan die regterkant af, deur trekking, stryking, afwerking, bedrukking en flensing.

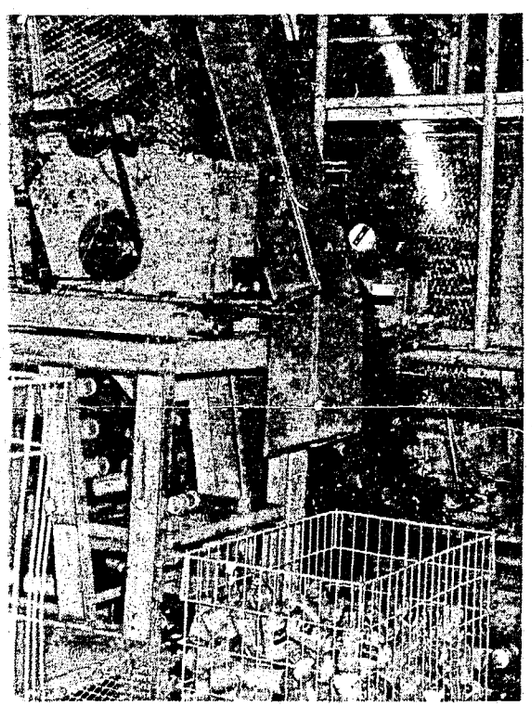


a suitable material. The request received attention at high level, and a special committee consisting of representatives of both concerns was established, with Iscor's Steel Marketing department at Headquarters as co-ordinator. The committee held regular monthly meetings to discuss test results, so that the metallurgists at the Vanderbijlpark Works, where experiments with the steel composition were being made, could effect modifications. In this way steady progress was made. Eventually a suitable quality tinplate was developed which could withstand the severe stresses imposed on the steel during the high-speed DWI operation.



Tinplate being fed into a line manufacturing two-piece cans at the Metal Box factory at Rosslyn.

Tinplaat word gevoer in 'n baan wat tweestukblikke in Metal Box se fabriek op Rosslyn vervaardig.



Four-colour decorating being effected. Having no seams, the tins can be decorated right round.

Versiering in vier kleure word aangebring. Omdat die blikke geen nate het nie, kan die blikke reg rondom versier word.

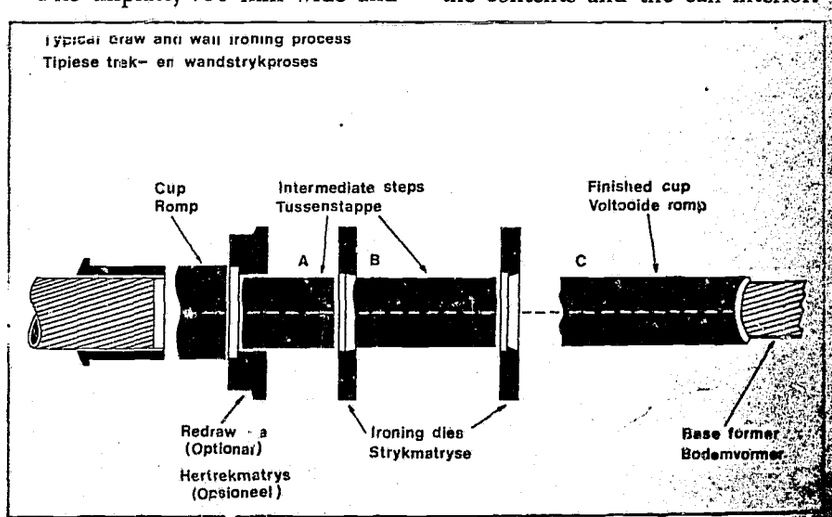
Earlier this year two four-ton coils of the new quality tinplate were shipped to Crown Cork and Seal Inc., Philadelphia, USA, for evaluation on its DWI lines. The trial runs, which went remarkably well, were also witnessed by two Iscor officials. Crown Cork and Seal Inc., one of the originators of the drawing and ironing technique, later stated in a letter that, of all the tinplate of this particular deep-drawing quality received from throughout the world, Iscor's product yielded the best performance as a "first timer". The company indicated that it was interested in purchasing some of the material, but the Corporation is not in a position at present to export this type of tinplate.

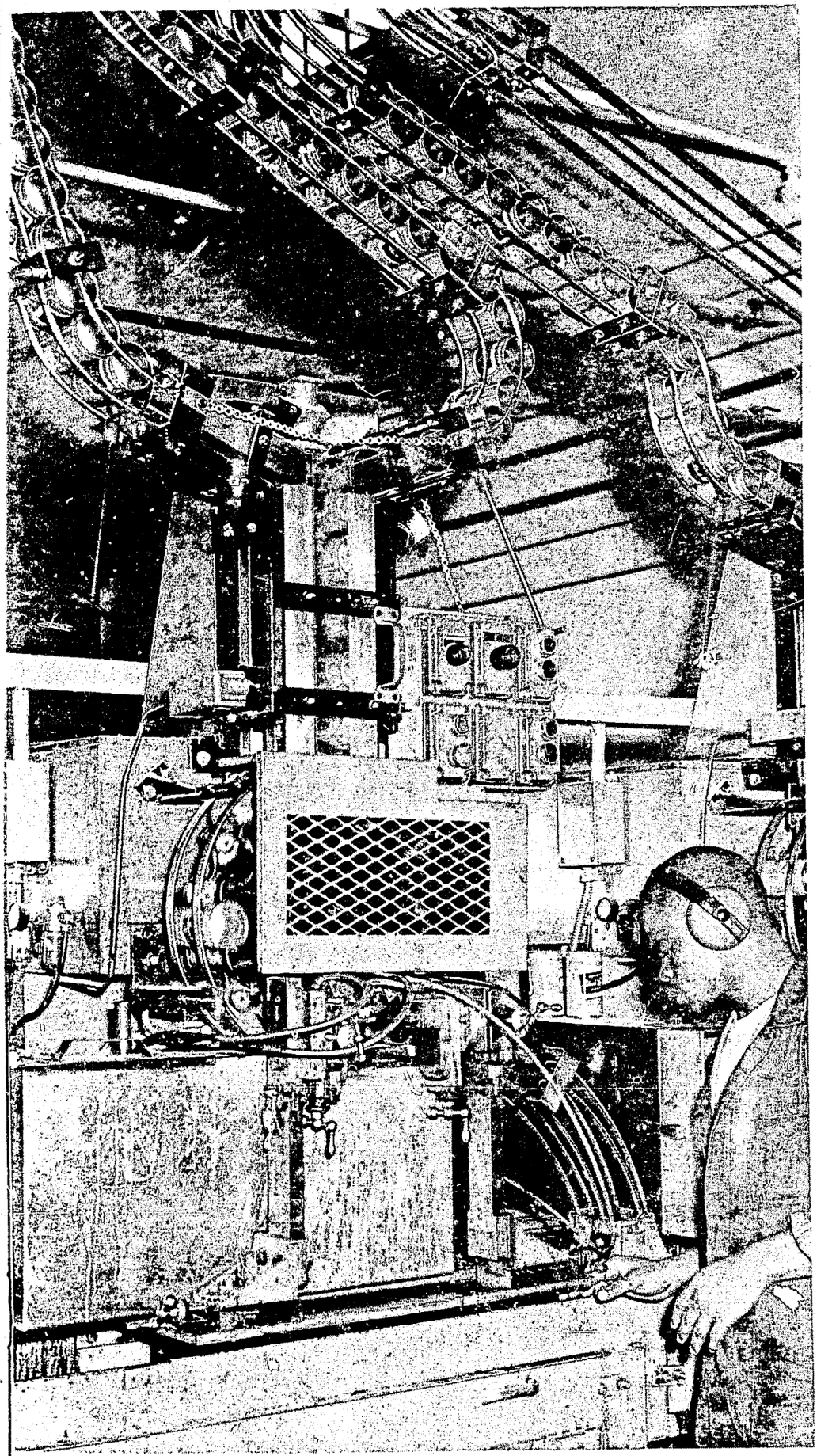
Crown Cork and Seal Inc. and the Continental Can Company almost simultaneously succeeded in developing a two-piece can. Metal Box, which is an international organization, manufactured its first two-piece cans at its Acton plant in the UK in 1971. Two-piece cans are now being manufactured by the company in various parts of the world.

The tinplate, 750 mm wide and 0,3 mm thick, is supplied in coils, and the tin coating has a mat finish, which becomes shiny during the drawing process. The mat finish is important, as the lubricant/coolant is collected in the small "pores" of the finish. The lubricant requirements are extremely tough, and the tin layer itself is relied upon to provide the slip in the drawing process.

During the first drawing stage, the cup is drawn to a depth of 45 mm and a diameter of 85 mm, and during the second stage to a depth of 60 mm and a diameter of 65 mm. From this stage onwards no more drawing is done, but the walls are "ironed" to a thickness of about 0,1 mm, ironing them to the required depth. At the end of the ironing process the can is 118 mm deep, with a diameter of 66 mm. The base of the can is then pressed into an inward dome shape, which serves as strengthening. The thickness of the can bottom remains at the original 0,3 mm.

The can is washed in a series of caustic solutions and dried, after which a base coat is applied and the can decorated. The decorating machine is capable of applying four colours in a design, after which the decoration is baked and cured. A necking or flanging machine then imparts a neck or flange to the can, ready to take the top after the can has been filled at the factory. The can is pressurized to test it for leakages and sprayed on the inside with epoxy lacquer to prevent any interaction between the contents and the can interior.





Kortliks

NOUE samewerking tussen Yskor en Metal Box SA Bpk het gelei tot die ontwikkeling van 'n spesiale tipe staal wat die land sowat R4,3-miljoen per jaar sal bespaar. Die staal, wat van dieptrek-gehalte is, word in die vorm van tinplaat aan Metal Box verskaf vir die vervaardiging van tweestukblikke in die maatskappy se fabriek in Rosslyn. Die blik van 340 ml, wat in die drank- en koeldrankhandel gebruik word, word in 'n trek- en strykproses tot die vereiste diepte vervorm, en slegs 'n deksel is daarna nodig. Tot etlike jare gelede was hierdie tegniek onbekend en kon slegs driestukblikke — met romp, bodem en deksel — vervaardig word.

An internal protecting coat being applied after the cans have been decorated on the outside.

'n Interne beskermlaag word aangebring nadat die blikke aan die buitekant versier is.

Kitstrappe

uit staal en beton

'n Voorbeeld van 'n spiraaltrap. Die persoon is mnr. Josh Broumels, mede-eienaar van die maatskappy wat die trappe vervaardig.

An example of a spiral staircase. The person is Mr. Josh Broumels, joint owner of the company manufacturing the stairs.

'n Voorbeeld van 'n voorafgegiete reguit trapeenheid wat deur Insta Mould vervaardig word. Die betonstygstukke bevat wapeningstaal en die eenheid is op twee steunbalke van staal gemonteer.

An example of a precast straight staircase unit manufactured by Insta Mould. The concrete risers contain reinforcing steel and the unit is mounted on two supporting beams of steel.

Briefly

STAIRCASES of steel and concrete are one of the specialities of Insta Mould (Pty) Ltd, a Boksburg company. The components of the staircases are made from concrete reinforced with steel. The staircase units are assembled with some components manufactured from steel.

The company also specialises in pre-cast concrete floor slabs reinforced with steel and cavity slabs made from plastic cells.

As the necessary manufacturing machinery is not available in South Africa the girders are still imported, but the machinery for their manufacture will be obtained from overseas as soon as the market justifies it, according to a company spokesman.

These girders are also used in the manufacture of precast walls for schools, houses, factories, offices, shops, hotels and clinics.

TRAPPE UIT STAAL en beton vir enige ruimte of doel. Dit is een van die spesialiteite van 'n onderneming van Boksburg-Noord — Insta Mould (Edms) Bpk.

Die trappe kan reguit of spiraalvormige eenhede behels, en die gedeeltes wat as trappies dien, word vooraf gegiet uit beton wat met wapeningstaal versterk is. In die geval van reguit trapeenhede word die trappies ook as gedeeltes vooraf gegiet. Daarna word dit aangebring op twee steunkolomme van staal, wat kan bestaan uit staalbuis of balk- of kanaalprofiele.

Vir die spiraaltrappe word die treetjies elk afsonderlik gegiet en by die oprigtingstoneel met behulp van 'n staalstruktuur aanmekaar geheg om die trapeenheid te vorm. Die trappe word om 'n middelkolom van staal gerangskik, terwyl die kantreling uit staal vervaardig en die afwerking van die balustrade van staal of hout gemaak word.

Elke trapeenheid word spesiaal vir die ruimte en doel waarvoor dit gebruik word, ontwerp. „Ons is bereid om trappe enige plek in die land op te rig," sê 'n woordvoerder van die maatskappy, „maar die afstand sal die koste beïnvloed."

Albei soorte trappe is reeds in verskeie geboue aangebring, en toe voorbeelde daarvan op die Randse Skou vertoon is, het dit groot belangstelling gewek. Die reguit trappe is veral geskik vir sakegeboue en die spiraaltrappe vir woonhuise en duplekswoonstelle — vernaamlik vir geboue waar die vloerruimte beperk is.

Die staalonderdele wat gebruik word, word feitlik uitsluitlik uit Yskor-staal vervaardig.

Die maatskappy bied nog 'n diens waarin van staal gebruik gemaak word: die aanbring van tussenvloere. Die basisse van die vloere word vooraf in die vorm van blaaie va 2,1 m wyd gegiet en skakel die duur en tydrowende aanbring van bekisting op die boutoneel uit.

Die lengte van die blaaie wissel na gelang van die vereistes tot 'n maksimum van 11 m. Die beton in die blaaie, wat met 'n netwerk wapeningstaal versterk word, word verder versterk met rondstaal van hoë treksterkte. Die rondstaal word in 'n outomatiese sweisproses wat vooraf plaasvind, tot tralielêers gevorm. Die gegiete beton, met die netwerk van wapeningstaal daarin, bedek slegs die onderste 50 mm van die lêers. Nadat die blaaie met behulp van 'n hyskraan op die boutoneel in posisie geplaas is, word die vloer voltooi deur die verlangde afwerking daarop te giet. Alle pype — byvoorbeeld vir elektriese bedrading — word tydens die voorafgietingsproses reeds in die blaaie aangebring.

Wanneer groot vloere op dié manier gelê word, is dit niks buitengewoons om oppervlaktes van 500 m^2 in 'n halfdag af te handel nie. Daarna word die elektriese pype en ander toerusting wat in die vloer kom, aangebring, voordat daar met die gietproses vir voltooiing van die vloer begin word. So 'n tussenvloer dien terselfdertyd as plafon vir die vertrekke daaronder — 'n verdere besparing.

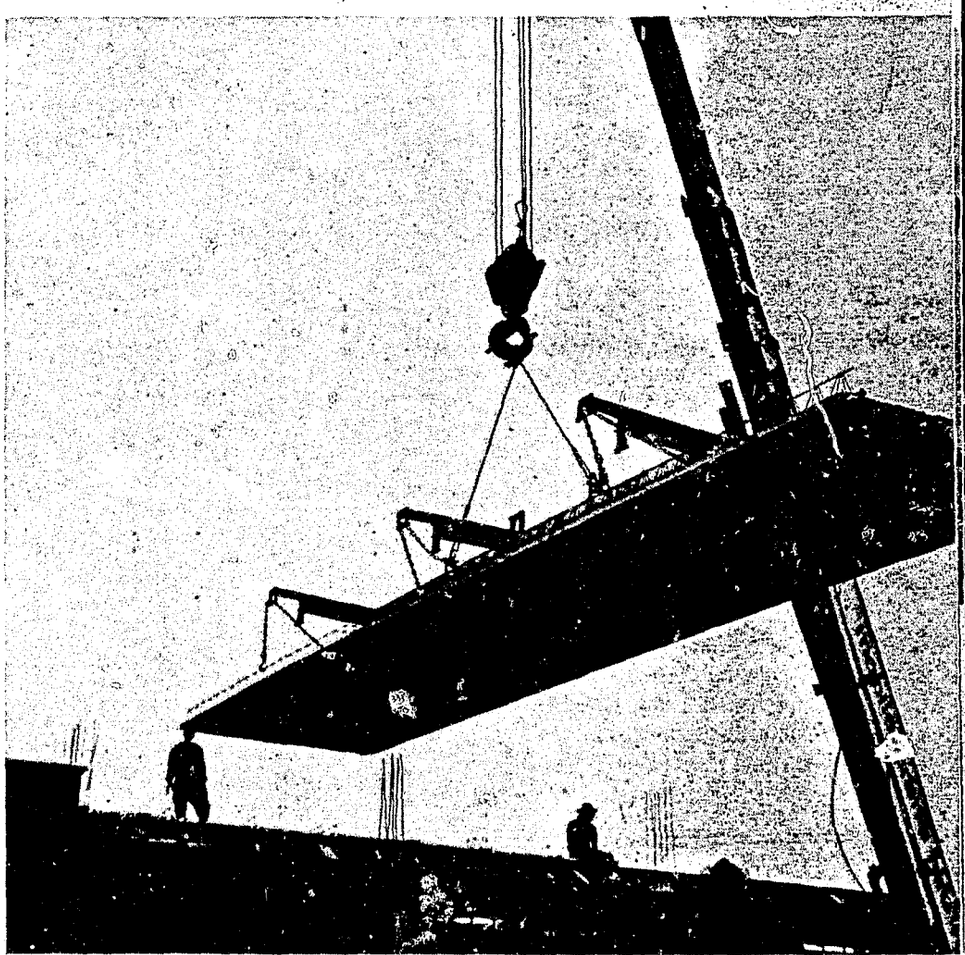
Die tralielêers word ook by die giet van die mure van voorafvervaardigde geboue gebruik. Talle ekonomiese huise, fabrieke, kantoorblokke, skole en klinieke is reeds op dié wyse op verskeie plekke in die land opgerig. Die mure word met 'n spou gegiet en dan gevul met 'n isoleermateriaal wat bestandheid teen koue of hitte verleen.

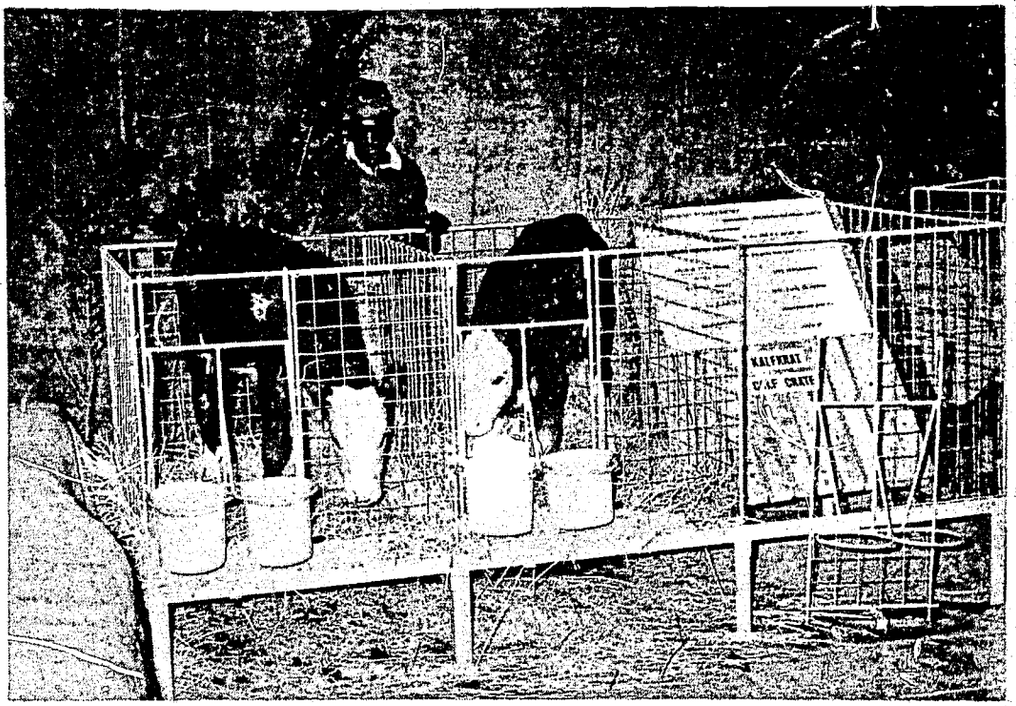
Die tralielêers word tans nog uit Nederland ingevoer aangesien daar — volgens 'n woordvoerder van die maatskappy — plaaslik nie die nodige vervaardigingsmasjinerie beskikbaar is nie. „Maar ons het reeds 'n ooreenkoms dat 'n vervaardigingsmasjien ingevoer sal word sodra die plaaslike mark dit regverdig," sê die woordvoerder.

Insta Mould behoort aan twee jong immigrante-broers uit Nederland, mnre. Josh en John Broumels. Hulle het as twee van die vier seuns van 'n bouer grootgeword en diplomas aan 'n tegniese hoërskool verwerf voordat hulle hul in Suid-Afrika kom vestig het — mnr. Josh Broumels nadat hy eers ook Australië en die VSA verken het.

'n Betonblad, voor afgegiet deur tralielêers te gebruik, word in posisie gehys.

A concrete slab, precast by using lattice girders, being hoisted into position.





Die kalwerkrat wat vrye beweging toelaat.

The free movement calf crate.

Kalwers swaarder in staalhokke

BOERE KAN nou uit Yskor-staal en met behulp van planne en literatuur wat van die Afdeling Landbou-ingenieurswese van die Departement van Landbou-tegniese Dienste verkry kan word, hul eie doeltreffende kalwerhokke bou. Dit staan as binnenshuise staankratte bekend en word beskryf as die jongste idee om kalwers deur die gevaarlike eerste twee maande van hul lewens te help.

Die planne en literatuur, wat deur deskundiges opgestel is, behels twee benaderings van dieselfde hokboubeginsel, die een slegs meer „gesofistikeerd" as die ander. Planne vir albei hokke kan bestel word, maar in die geval van eersgenoemde tipe is die hokke ook in die handel beskikbaar. Die planne is deur 'n private maatskappy van Yeoville, Johannesburg — H. G. F. Engineering (Pty) Ltd — van die departement bekom en die hokke word in effens meer gesofistikeerde vorm vervaardig.

Die „gesofistikeerde" stelsel maak voorsiening vir die vasmaak van elke kalf, met 'n ligte ketting om sy nek, in sy eie krat. Die kalf kan lê of staan, maar nie omdraai nie. Die krat is normaalweg 0,6 m wyd, 1,4 m lank en 0,84 m hoog, en word uit Yskor-hoekprofiele en -staaf aanmekaar gesweis. Dit kry 'n hortjiesvloer van hardehout wat tussen 0,3 en 0,45 m bokant die betonvloer staan.

In hoepelringe aan die voorkant van die krat kan twee emmers geplaas word. Die een emmer hou die kragvoer, die tweede die melk of water, en daar is 'n hooirakkie op die afskorting tussen die kratte. In die handelsmodel word die water, benewens ander verfynings, deur middel van 'n drinkspeen wat deur 'n balklep gevoed word, voorsien.

Die kalf se afvalstowwe val deur die hortjiesvloer wat van hardehoutstroke van 25 x 38 mm gemaak word, met gapings van 25 tot 30 mm tussen die stroke. Die afval wat sodoende onder die kratte versamel, word daagliks meganies of met die hand uitgeskraap of met 'n tuinslang uitgespuit.

Indien die kratte stert aan stert in die gebou geplaas word, kan die toesighouer of arbeiders agter die kalwers op die hortjiesvloer opklim om inspeksie uit te voer of om skoon te maak. 'n Middelstrookplank is verwyderbaar sodat die vloerkanaal met 'n besem skoongemaak kan word.

Omdat kalwers uiters gevoelig vir vloertrekke is, word 'n muurtjie aan die voorkant van die krat en doeltreffende klappe in die ventilasie-openings van die gebou aangebring om dié gevaar uit te skakel.

Die kratte kan ook kop aan kop of in 'n enkelry gerangskik word. Die kop-aan-kop-uitleg sonder diensgange agter die kratte verg 'n effens smaller gebou en kan dus meer ekonomies wees. Die verwydering van die afvalstowwe wor

egter bemoeilik omdat toegang tot die vloerkanaal nie moontlik is nie.

Die eenvoudiger tipe krat verleen vrye beweging aan die kalf deurdat dit daarin kan ronddraai. Elke krateenheid beskik oor drie afsonderlike hokkies en 'n eenheid kan deur twee werkers verskuif word. Elke hokkie is 0,9 m wyd, 1,2 m lank en 1,2 m hoog, sodat die totale wydte, lengte en hoogte van 'n eenheid onderskeidelik 1,2, 2,7 en 1,2 m is. Die hoogte sluit die 0,3 m van die bene van die eenheid in. Die vervaardigingsmateriaal is dieselfde as in die geval van die ander hok, en die benadering van drie hokke per eenheid — soos in die geval van die „gesofistikeerde" stelsel ook — bied 'n besparing aan vervaardigingsmateriaal deurdat twee kante met elke drie hokke uitgeskakel word.

Om moontlike verspreiding van siektes te beheer, word kalfvleisprodusente wat van die staankratstelsel gebruik maak, aangeraai om die kalwers wat elke week opgekoop word, as 'n aparte groep in 'n stel kratte te plaas. Die stelle kratte moet deur middel van 'n soliede muur van mekaar geskei word om isolering te verkry.

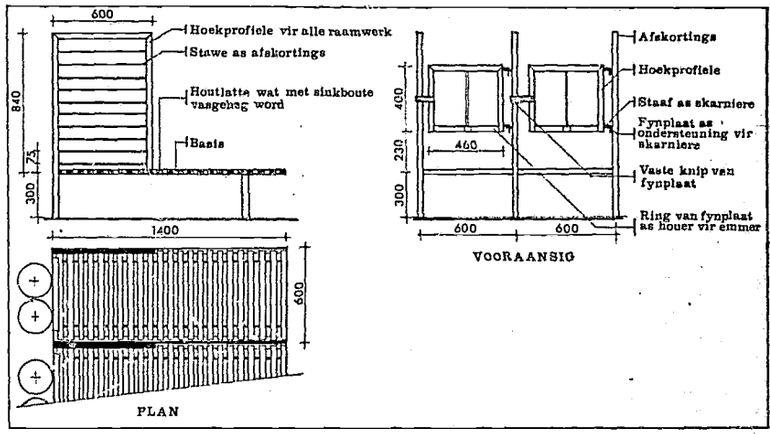
Ten einde aan al die vereistes vir so 'n staankratstelsel te voldoen, is 'n ligte tipe gebou ontwerp. Planne hiervoor is ook beskikbaar en die konstruksiemateriaal is weer eens hoofsaaklik Yskor-staal. Dit is 'n goedkoop konstruksie wat gou opgerig kan word en netjies vertoon. In die somer verskaf die gebou met gemak die voorgeskrewe ventilasietempo van 0,015–0,03 m^3/min/kg lewende massa, en in die winter kan die ventilasietempo deur middel van verstelbare klappe volgens spesifieke behoeftes gereguleer word. Voldoende lugvolume word toegelaat om te voldoen aan die voorgeskrewe 4,2 tot 7,0 m^3 per kalf.

'n Proefneming wat by Cedara uitgevoer is, het getoon dat verskalwers wat 90 dae lank volgens die binnenshuise staankratstelsel gehuisves is, gemiddeld 9 kg swaarder was as kalwers wat gehuisves was volgens 'n verouderde stelsel waar hulle meer aan die elemente blootgestel was.

Briefly

FARMERS can now build their own calf crates from Iscor steel, using plans and literature obtainable from the Agricultural Engineering Division of the Department of Agricultural Technical Services. The containers are known as indoor crates and are described as the latest idea to help tide calves over the dangerous first two months of their lives. The plans entail two approaches to the same crate-building principle, the one more "sophisticated" than the other. The crates can be housed in buildings also constructed mainly from Iscor steel, and the plans are also obtainable from the Agricultural Engineering Division.

The "sophisticated" system is commercially available, the plans having been obtained by a private company, H. G. F. Engineering (Pty) Ltd — of Yeoville, Johannesburg — which manufactures it.

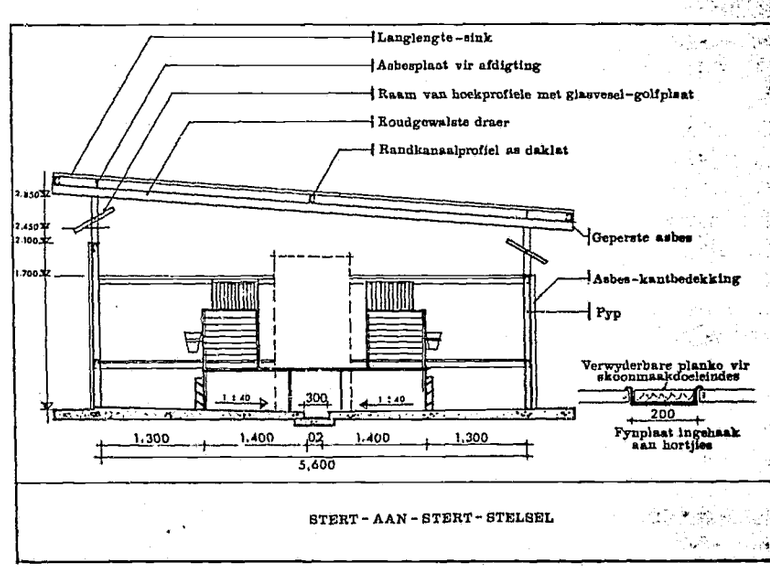


Die plan en vooraansig van die „gesofistikeerde" kalwerkrat.

The plan and front elevation of the "sophisticated" calf crate.

'n Sy-aansig van die spesiaal ontwerpte gebou vir die behuising van binnenshuise staankratte. Die skets toon tipiese behuising van „gesofistikeerde" kratte.

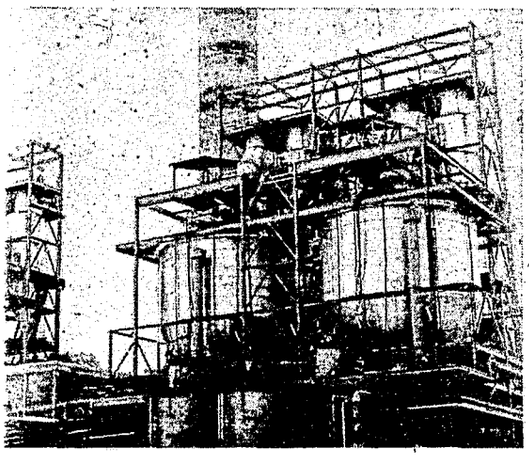
A side elevation of the specially designed building for the housing of indoor crates. The sketch shows typical housing of "sophisticated" crates.



Consani's ...A COUNTRY-WIDE OPERATION

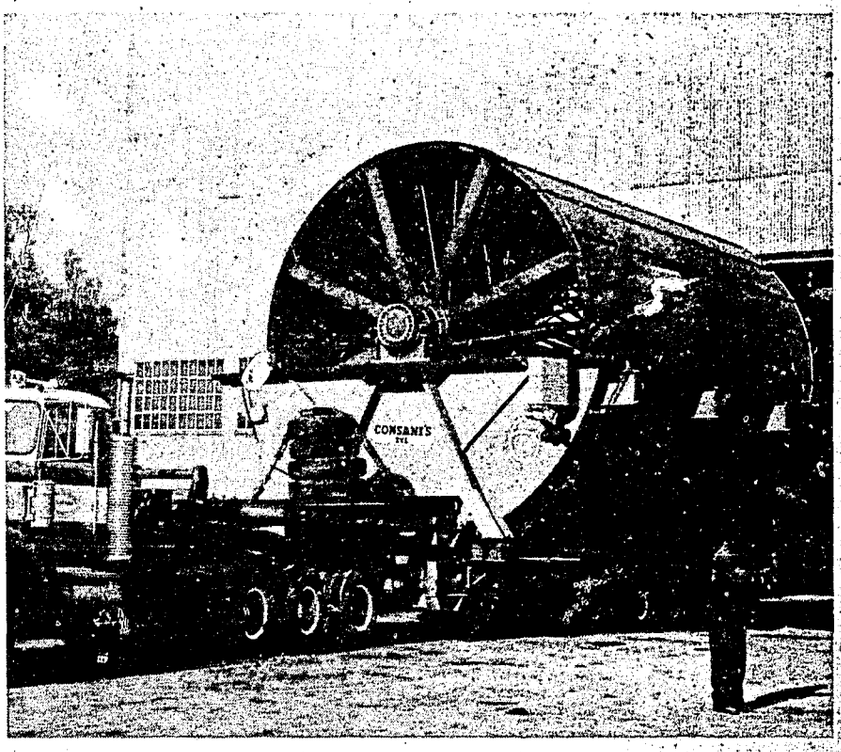
Kortliks

INDUSTRIËLE filters, verhitters en roosterbrandoonde ter waarde van byna R1,5-miljoen is die afgelope jaar deur Consani's Engineering (Tvl) (Edms) Bpk, van Springs, vervaardig en opgerig. Daarvoor is meer as 'n duisend ton Yskor-staal, hoofsaaklik plaat en fynplaat, gebruik. Dit verteenwoordig 'n gedeelte van die maatskappy se jaarlikse gemiddelde verbruik van sowat 4 000 ton staal, wat grotendeels van Yskor verkry word.



Roasters manufactured by Consani's Engineering for Ergo. The photo was taken at Ergo's site at Brakpan, where the roasters form part of the sulphuric acid plant.

Roosterbrandoonde wat deur Consani's Engineering vir Ergo vervaardig is. Die foto is op Ergo se terrein by Brakpan geneem, waar die oonde deel van die swaelsuuraanleg uitmaak.



INDUSTRIAL filters, heaters and roasters to the value of almost R1,5 million were manufactured and erected by Consani's Engineering (Tvl) (Pty) Ltd, during the past year. In the execution of these orders, more than a thousand tons of Iscor steel, mainly plate and sheet, were used.

The orders formed part of the company's activity of manufacturing industrial equipment from various materials. Its use of steel, the bulk of which is obtained from Iscor, averages approximately 4 000 tons per annum.

The concern is a member of the Abercom group of companies. Consani's Engineering (Cape) (Pty) Ltd, of Elsies River — also an extensive user of Iscor steel — is a sister company with which Consani's (Tvl) sometimes co-operates in contracts. The companies have on several occasions co-operated in bulk storage projects, and the latest example is a Sasol II contract — Consani's (Tvl) undertaking the fabrication and Consani's (Cape) the erection of the bulk storage tanks.

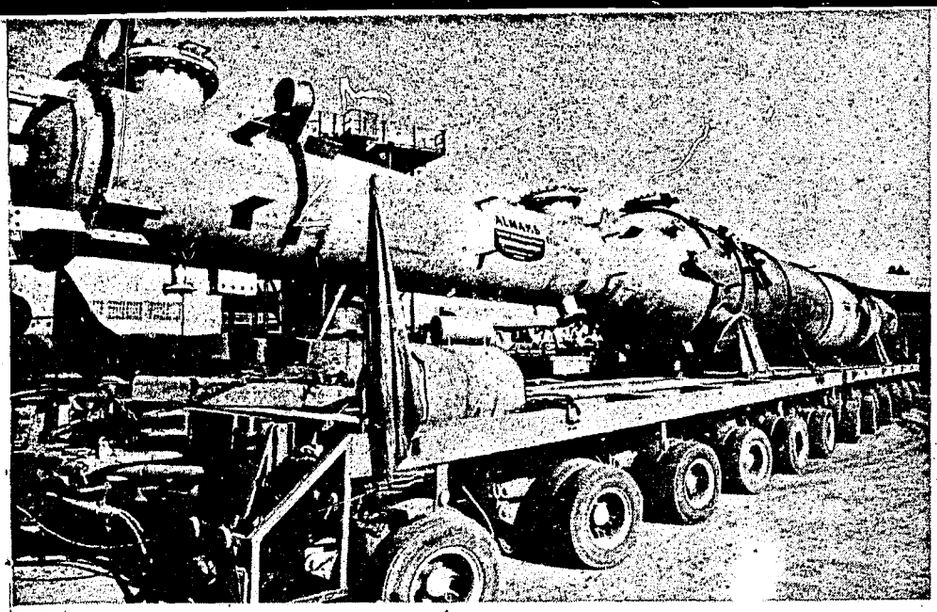
Apart from filters, heaters and storage tanks, both companies also manufacture pressure vessels and undertake general platework and heavy structural steelwork. Site

One of the filters manufactured for the Elandsrand gold mine, Carletonville, being dispatched from Consani's works at Nuffield, Springs.

Een van die filters wat vir die Elandsrand-goudmyn, Carletonville, vervaardig is, word vanaf Consani se werke in Nuffield, Springs, versend.

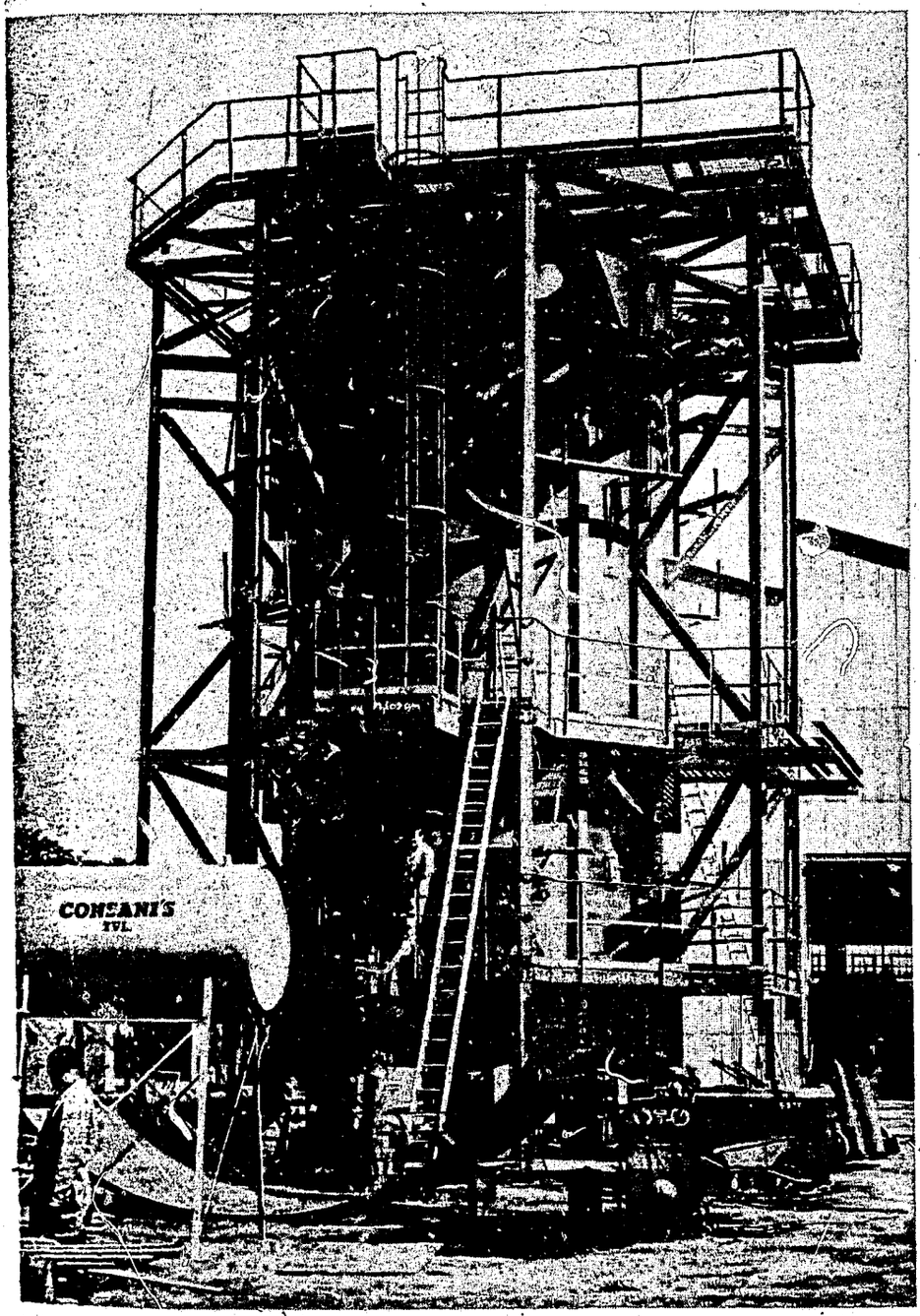
A heater for the Sasol II project being pre-assembled.

'n Verhitter vir die Sasol II-projek word vooraf gemonteer.



One of the two phenol columns manufactured by Consani's in conjunction with a sister company, Almaks, for the Sasol II project, being transported.

Een van die twee fenolkolomme wat deur Consani's, in samewerking met 'n sustermaatskappy, Almaks, vir die Sasol II-projek vervaardig is, word vervoer.



erection work is carried out with the use of the companies' own equipment, such as mobile cranes and welding plants.

The heaters manufactured during the past year include 11 radiant sections of cylindrical type heaters for Sasol II. The order was placed by Foster Wheeler Ltd, and the units vary in size from 7,5 m high by 3,3 m in diameter to 12 m high by 5,35 m in diameter.

Also during this period three roasters, each 24 m high by 14,5 m in diameter, as well as cyclones, were manufactured for the East Rand Gold and Uranium Co. Ltd (Ergo) project, the order having been placed by Lurgi SA (Pty) Ltd. In this instance,Consani's was also responsible for the tanks and cyclones for the sulphuric acid plant, and a total of 600 tons of steel was used for the project. The company also manufactured and delivered 16 rotary drum filters, the order having been placed by Edward L. Bateman Ltd. For the filters a total of 256 tons of steel was used.

During the past year Consani's (Tvl) also, in conjunction with another sister company in the group, Almaks Engineering (Pty) Ltd, manufactured two phenol columns for Sasol II. The order was placed by Fluor SA (Pty) Ltd. The columns are 1,95 m in diameter and 26,5 m long and were manufactured at the company's works at the Nuffield industrial area, Springs, and delivered to the site as single units.

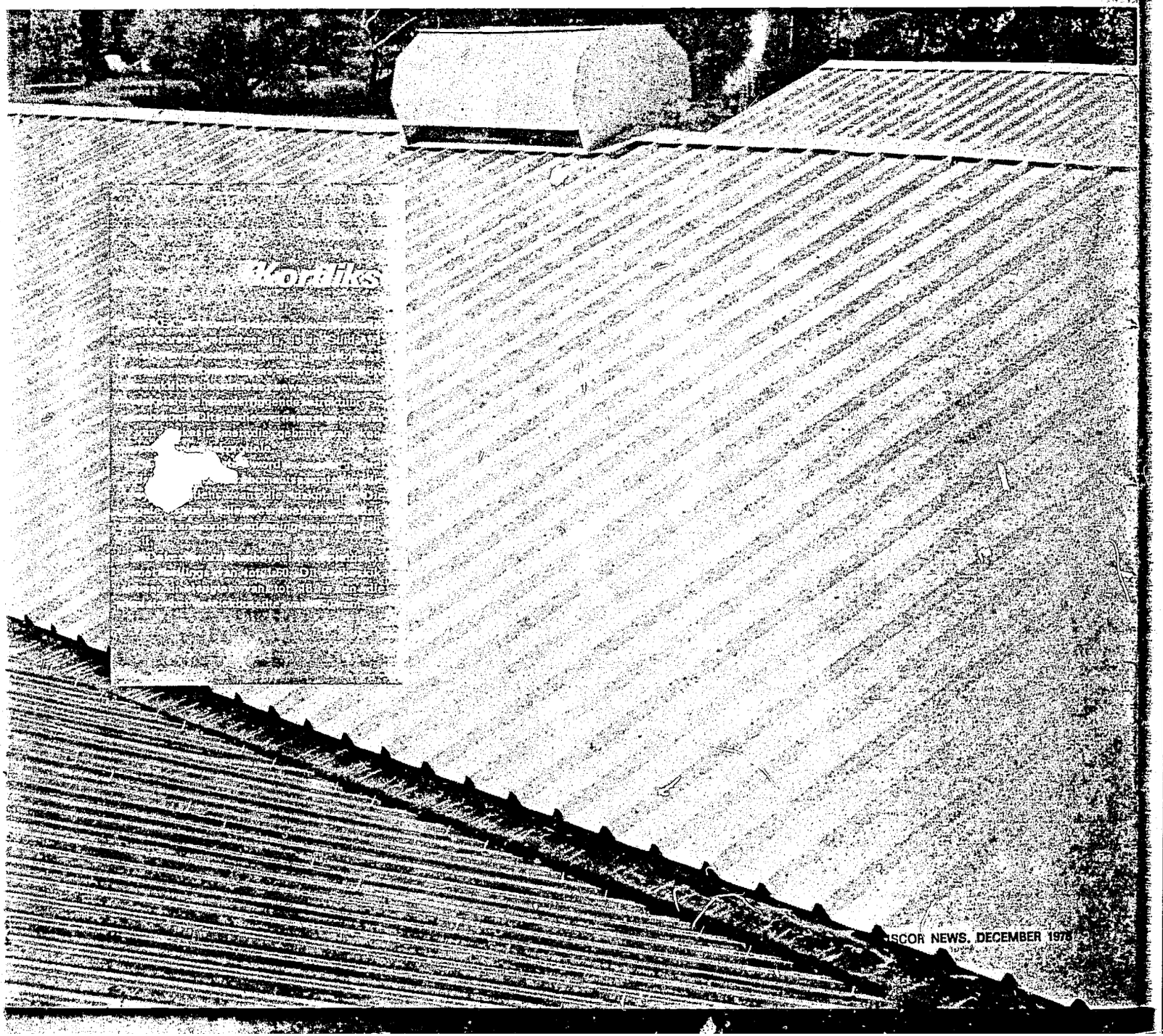
The works has a floor area of 8 500 m^2 under roof and 19 500 m^2 uncovered. All work carried out is subject to inspection during manufacture by he company's quality control department.

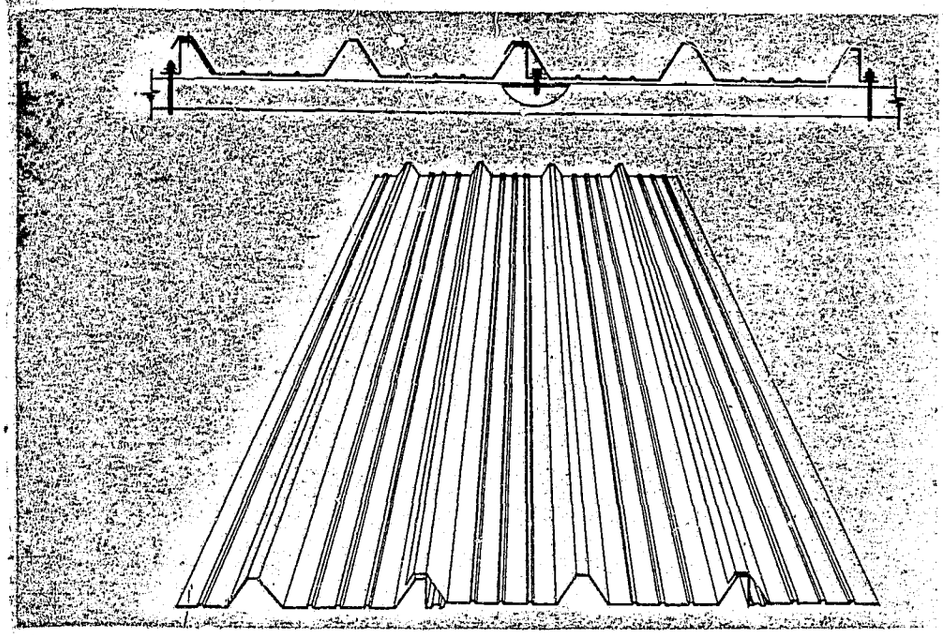
Fixing method makes this roof unique

WHEN THE technology evolved which produced the first galvanized steel, it was soon apparent that this material, with its low mass-to-strength ratio, would be used to an increasing extent in cladding walls and roofs. Buildings of wood and "iron" — corrugated galvanized steel sheet — built before the turn of the century, are still in existence to prove that this relatively inexpensive material can be attractive and resistant to a variety of adverse environmental conditions.

The first corrugated profile was quite satisfactory for the high-pitched roofs of that time, but changing architectural modes demanded a more sophisticated roofing profile — improved aesthetically and designed to be used in longer lengths on flatter roofs.

Steel sheet expands 0,69 mm per linear metre through a temperature increase of 40° C. In sheet lengths of up to 20 m a problem arise at the points where the fasteners pierce the sheets to fix them to the underlying structure. Expansion and contraction, resulting from temperature extremes, set up stresses which can loosen fasteners and damage cladding sheets, particularly at fastening points, where enlarged holes admit water. This, and deformation of the sheets, are primary causes of leakage encountered especially in areas where wide temperature extremes prevail.





These drawings show how the fastening points are sheltered from the weather. Two other advantages are the upright support which resists pressure and the attachment flange which rests directly on the purlin.

Hierdie tekeninge toon hoe die vashegpunte teen die weer beskut is. Twee ander voordele is die regop stut wat weerstand teen druk verleen en die vashegtingsflens wat direk op die kaplat rus.

The neat appearance of Dekex is evident when compared with the conventional roof in the foreground.

Die netjiese voorkoms van Dekex is duidelik sigbaar wanneer dit met die konvensionele dak op die voorgrond vergelyk word.

The Dekex roofing system, produced by Dekex Southern Africa (Pty) Limited, is the latest developed to obviate the difficulties which can result from differential thermal movement between the roofing and the underlying structure. It is an entirely South African development, and its main feature is the method of fixing the roofing sheets to the purlins.

With the Dekex system the sheet is fastened at the side lap. The main fasteners pass through oversize holes in the side-lap flange which rests directly on the purlin. The shorter fastener is more positively fixed, and deformation occurring with conventional roofing, by over-tightening of fasteners which pass through the crowns of the profile, is avoided. Main fasteners are concealed by the overlap of the adjoining sheet so that waterproof sealing washers are not required. The main fasteners and oversize holes allow differential movement of the roof membrane and the supporting structure, but, being concealed, do not permit leakage.

Secondary fastening is by means of side-lap stitching of the overlapping crowns, using waterproof pop rivets. As these are not fixed to the purlins, they are not subject to the stresses imposed by differential expansion. Stitching reinforces the overlap and prevents lifting of the sheets. The appearance of the roof surface is therefore not marred by unsightly fasteners. An important feature is the vertical leg of the flange which supports the crown, stabilizing it for drilling and punching, and preventing deformation by roof traffic.

Another advantage of the direct flange-to-purlin contact is easy fixing, because the purlin is always visible. No special tools or fasteners are required and semi-skilled labour can be quickly trained in roof laying, according to Dekex. The 54 mm rib depth imparts rigidity to the sheet, which resists deformation during transport, handling and installation. It also permits wider purlin spacing.

Dekex is claimed to be suitable for flat roofs with pitches down to 1:60, and tests have shown that it is weatherproof even under conditions of extreme flooding.

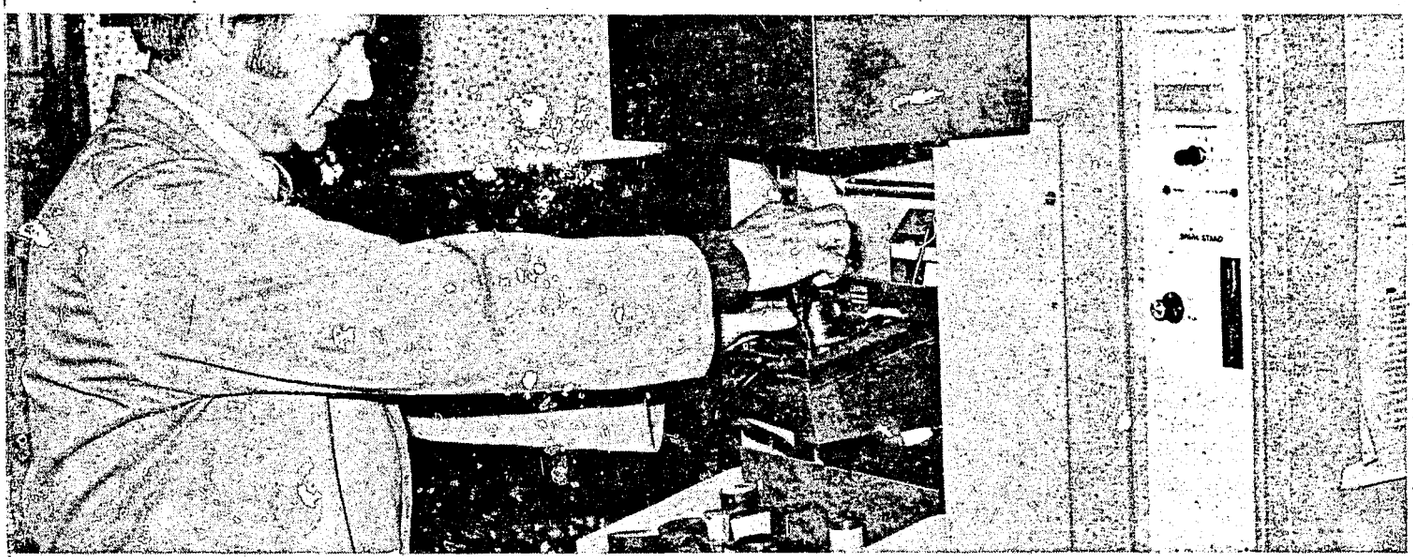
The Dekex system was invented by Mr. Allan Lester who has had many years' experience in the building trade. It has been patented locally and overseas.

Dekex sheets are available in lengths of up to 18 m with a cover width of 550 mm. Apart from galvanized steel, Dekex can be produced from Cor-Ten, Chromadek colour-coated steel sheet, aluminium and fibreglass-reinforced polyester resin.

Dekex offers good resistance to heavy roof traffic.

Dekex bied goeie weerstand teen swaar dakverkeer.

Slytbestandheid verhoog deur S-Cast-proses



IN DIE MODERNE nywerheid is een van die grootste probleme die hantering van materiale wat, uit die aard van hul samestelling, hoë slytasie veroorsaak aan die apparaat wat vir die verwerking daarvan gebruik word.

Baie nywerheidsprosesse is deurlopend aan die gang — dag en nag, week in en week uit — en dit is uiters noodsaaklik om produksieverlies weens swak materiaal in die een of ander stadium van die proses sover moontlik uit te skakel.

By die verwerking van minerale en ander grondstowwe word slytbestande materiaal gebruik in die vorm van verharde staalplaat en gegiete staal- of ysterlegerings, met samestellings wat wissel vir die verskillende toepassings. Deur die jare heen is gebruik gemaak van konvensionele slytbestande materiale, soos mangaanstaal, gewalste plaat, wityster, Ni-Cr-yster (Ni-hard), en nog meer.

Die behoefte bestaan steeds om die betrokke materiale te verbeter en sodoende 'n langer lewe te verkry. Ni-hard is al baie lank bekend vir sy hoë slytbestandheid, maar die gebruik daarvan was vroeër beperk omdat die materiaal, weens sy hardheid van 450-550 BHN, redelik bros en dus nie so skokbestand is nie.

Sowat twintig jaar gelede het E. Sabel in Swede 'n proses ontwikkel om Ni-hard se skokbestandheid te verhoog, en S-Cast, soos die versterkte Ni-hard tans bekend staan, is deels na hom vernoem. Die proses is steeds verbeter, en met nuwe ontwerpe is nuwe toepassings vir bepaalde gebruike gevind.

Sedert verlede jaar word die proses ook in Suid-Afrika toegepas nadat Apex Nywerhede (Edms) Beperk, van Vereeniging, 'n lisensie-ooreenkoms met die betrokke Sweedse maatskappy aangegaan het.

Verskeie lande, soos die VSA, Japan, Europese lande en Australië, maak met groot sukses van die proses gebruik.

S-Cast kan beskryf word as 'n materiaal met besonder hoë slytbestandheid weens sy hardheid van 600 BHN of hoër, en wat sodanig met staal versterk is dat dit sowel hoë skok as hoë druk onder vergruisingstoestande kan weerstaan.

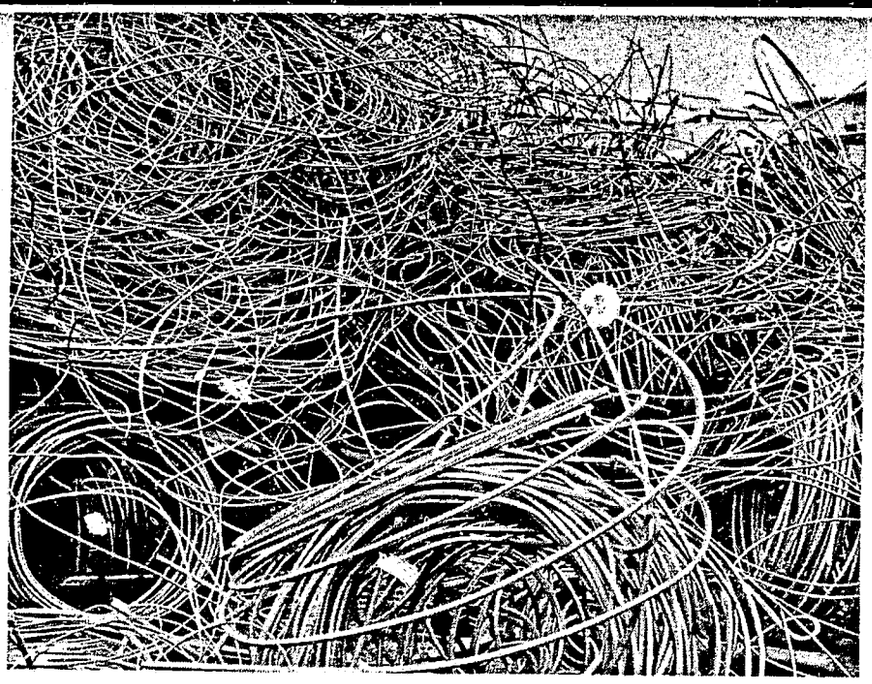
S-Cast word tans baie suksesvol

Materiaal wat gebruik word vir die vervaardiging van S-Cast-slytplate word in Apex se laboratorium deur mnr. J. van Heerden, hoofwerkeskeikundige, geanaliseer.

Material used for the manufacture of S-Cast wearing plates is analysed in Apex's laboratory by Mr. J. van Heerden, chief works chemist.

Die boonste en onderste dele van 'n vorm waarin 'n mantel vir 'n sekondêre vergruiser by die Sishen-ysterertsmyn se Noordaanleg gegiet gaan word.

The top and bottom parts of a mould in which a mantle is to be cast for a secondary crusher of the North plant at the Sishen iron ore mine.

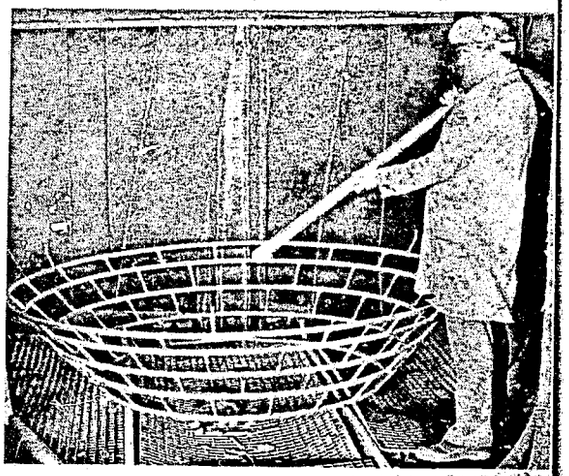


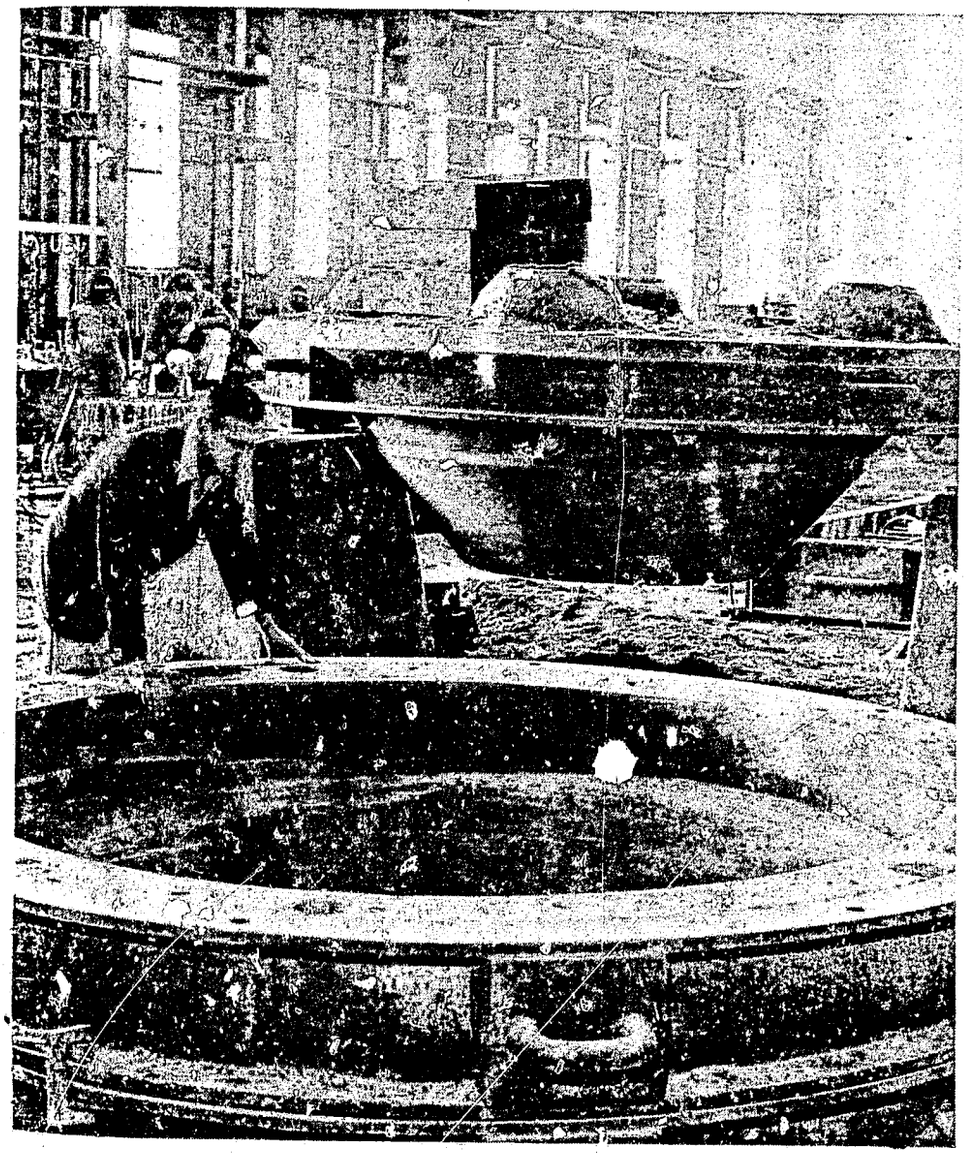
Staalskrot is die vernaamste grondstof vir die vervaardiging van S-Cast-slytplate.

Steel scrap is the main raw material for the manufacture of S-Cast wearing plates.

Hierdie staalversterking sal in die mantel van 'n S-Cast-slytplaat ingegiet word. Apex Nywerhede, van Vereeniging, vervaardig S-Cast-plate sedert verlede jaar.

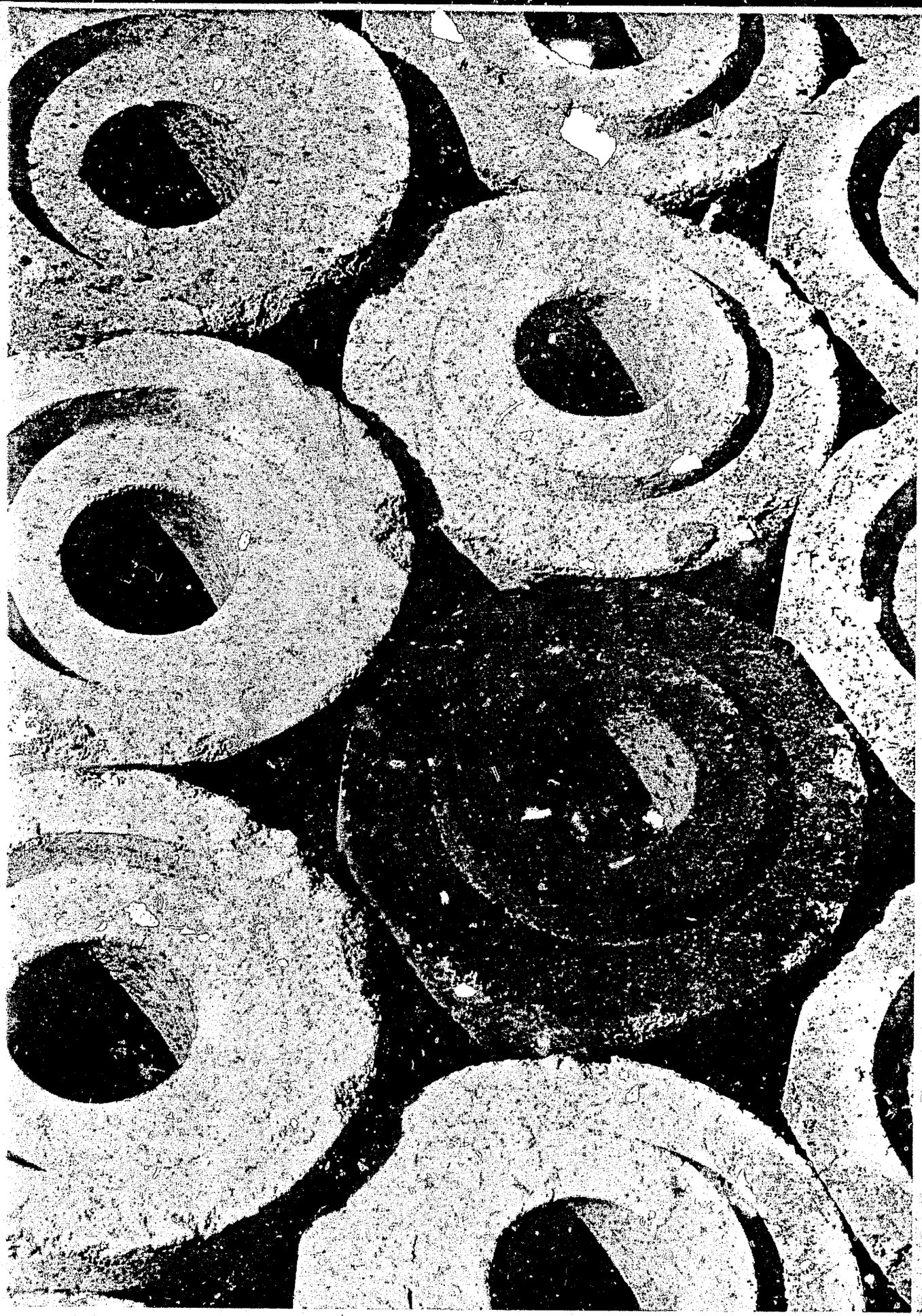
This steel reinforcing is to be cast into the mantle of an S-Cast wearing plate. Apex Industries, of Vereeniging, has been manufacturing S-Cast plates since last year.





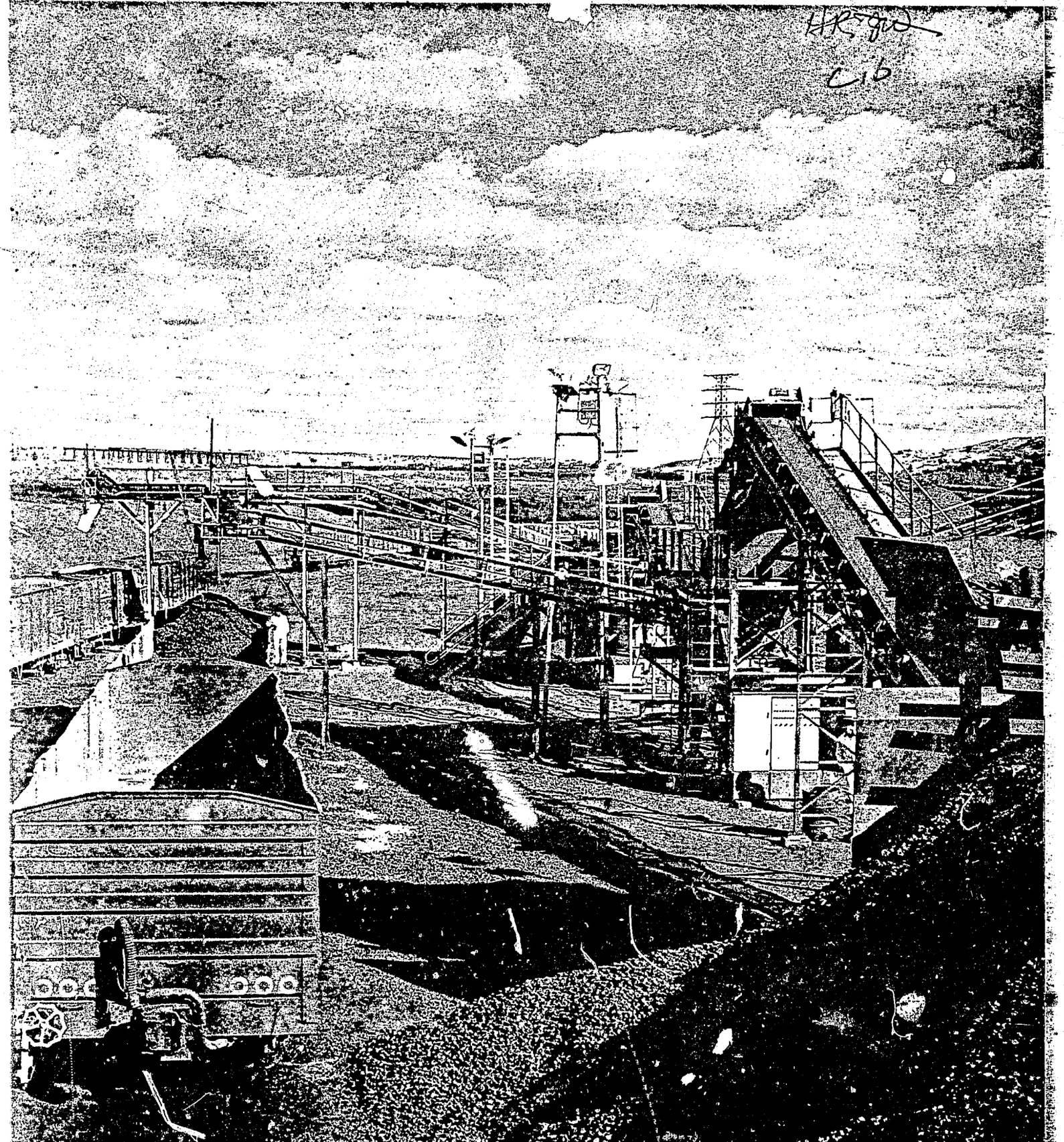
Dié S-Cast-slytplaat is in vernietigingstoetse beskadig om te toon hoe die staalversterking sy identiteit behou en die dele in posisie hou. Mnr. W. Smith, van Apex, wys na die versterking.

This S-Cast wearing plate was damaged during destruction tests to show how the steel reinforcing retains its identity and keeps the parts in position. Mr. W. Smith, of Apex, points at the reinforcing.



Refractories

Gedruk deur Perskor, Doornfontein, Johannesburg



YSKORNUUS
ISCOR NEWS

JULIE 1979 JULY

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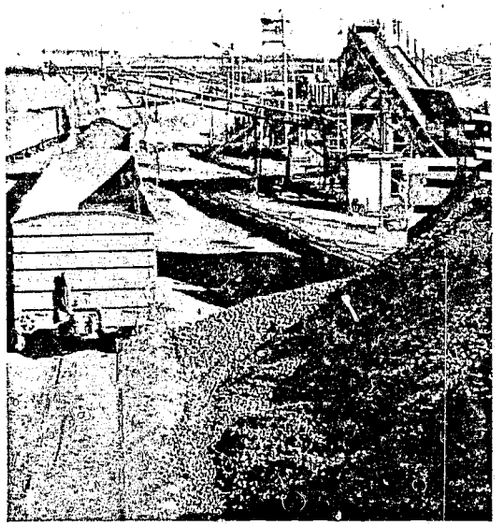
Voorblad

'n Blik op die sifaanleg in die Newcastle-suidwerke waar gemengde kooks herwin word. (Kyk bl. 1)

Cover

A view of the screening plant at the Newcastle South Works where mixed coke is reclaimed. (See page 1)



YSKORNUUS
ISCOR NEWS

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DIE TYDSKRIF VAN DIE SUID-AFRIKAANSE YSTER EN STAAL INDUSTRIËLE KORPORASIE, BEPERK

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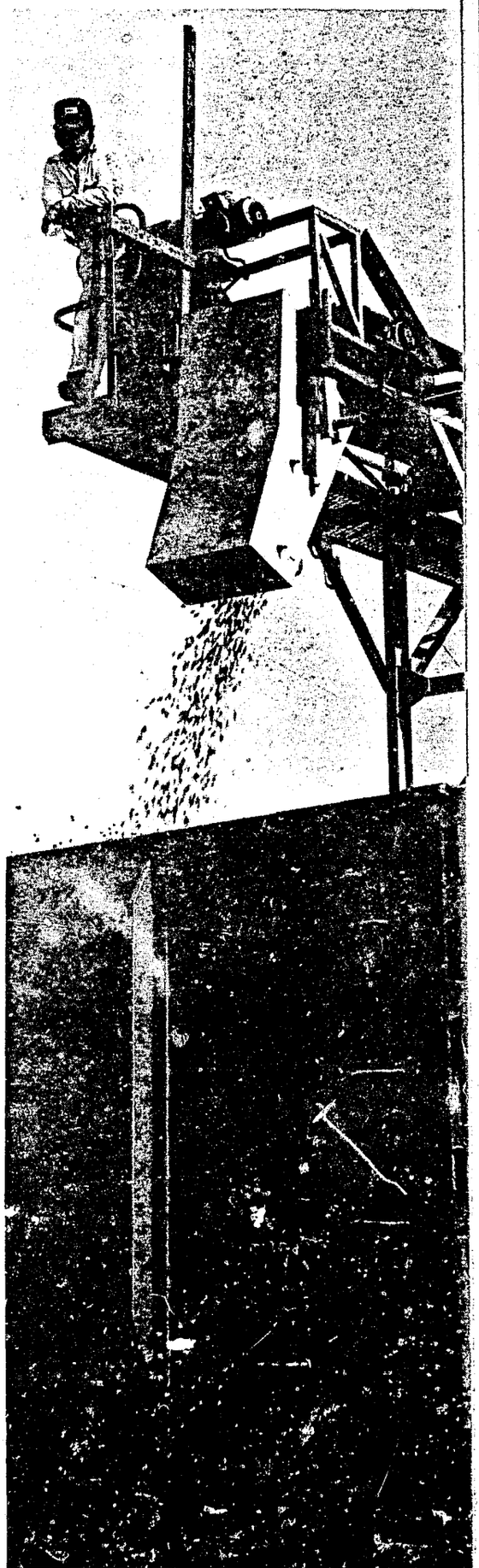
'n Toneel by die mobiele sifaanleg in die Newcastle-suidwerke — gesifte kooks stort in 'n spoorwa.

A scene at the mobile screening plant in the Newcastle South Works — screened coke drops into a rail wagon.



Wenk lewer meer as R6-miljoen

Dr. E. Raats, Bestuurder, Metallurgiese Afdeling, Newcastle-werke, met die merietesertifikaat wat deur die Nasionale Produktiwiteitsinstituut aan hom toegeken is.

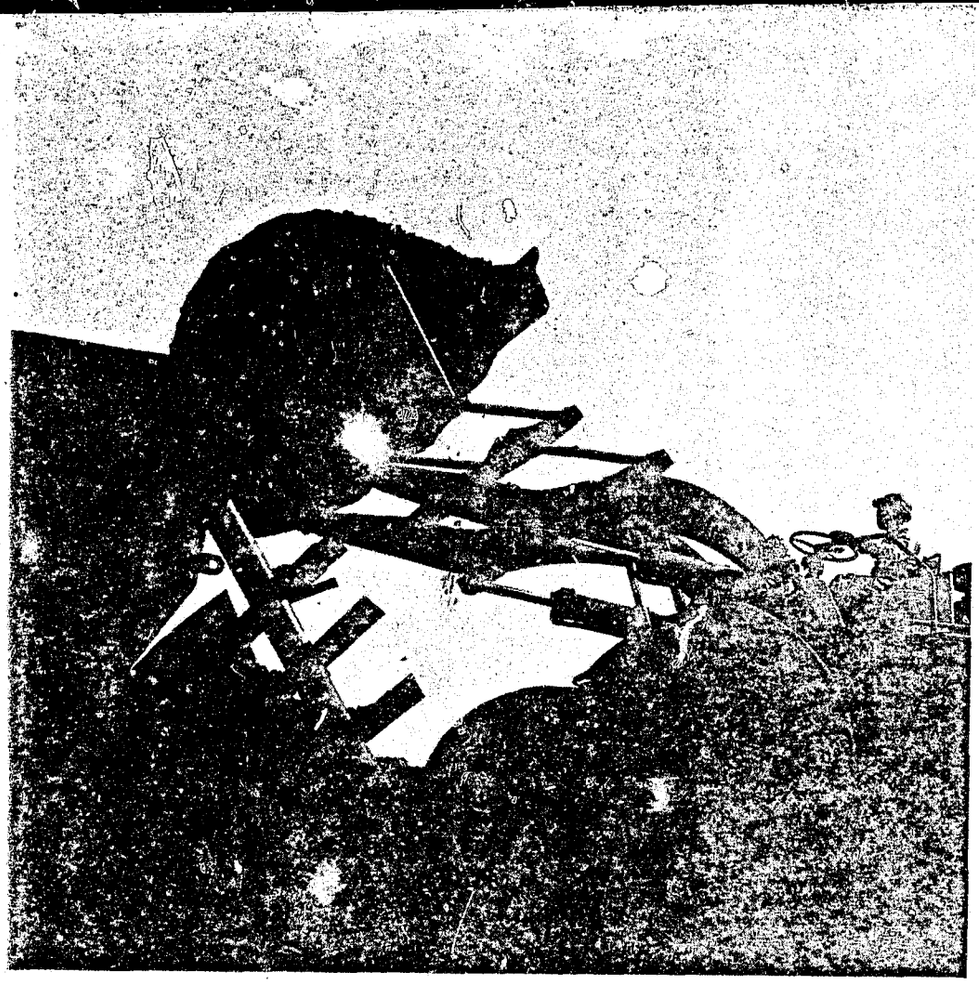
Dr. E. Raats, Manager, Metallurgical Division, Newcastle Works, with the certificate of merit awarded to him by the National Productivity Institute.

'N WENK wat daartoe gelei het dat Yskor in die eerste jaar van die implementering daarvan meer as R6-miljoen gebaat het deur 'n bestaande bron meer produktief te gebruik, kan in die toekoms dalk tot verdere produktiwiteitsverbeterings aanleiding gee.

Die wenkgewer, dr. E. Raats, Bestuurder, Metallurgiese Afdeling, Newcastle-wer' , het onlangs openbare erkenning ir sy voorstel gekry toe 'n meriete..ertifikaat van die Nasionale Produktiwiteitsinstituut (NPI) aan hom toegeken is. Die oorhandiging van die sertifikaat is op 'n byeenkoms in Johannesburg deur die voormalige Minister van Ekonomiese Sake, mnr. J. C. Heunis, waargeneem. Toekennings is terselfdertyd aan nog persone en ondernemings gedoen ter erkenning van hul bydraes tot produktiwiteitsverhoging.

In sy toespraak het mnr. Heunis daarop klem gelê dat Suid-Afrika 'n stadium bereik het waarin sy ekonomie nie verder kan groei deur die toevoeging van produksiebronne nie. Die enigste uitweg is om sy bronne beter te benut, d.w.s. deur die verhoging van produktiwiteit.

Dr. Raats se wenk het in verband gestaan met die herwinning van gemengde kooks by die Newcastle-werke waarvan sowat 90 per-



Kooks wat van 'n gemengde hoop geskep is, word in die toevoerbak van die sifaanleg gestort.

Coke scooped from a mixed pile, being deposited into the feed hopper of the screening plant.

sent te fyn was om in die hoogoonde te gebruik en in die veld gestort en afgeskryf was.

Sy wenk maak voorsiening daarvoor dat dit gesif word, dat die geringe persentasie metallurgiese kooks wat ontstaan, in die hoogoonde aangewend word en dat die kooksneute en -ertjies verkoop word of by buite-instansies geruil word vir metallurgiese kooks. 'n Kontrak is met die onderneming Coke Producers (Pty) Ltd gesluit om die ruiling van die kooks te bewerkstellig, en in die eerste jaar van implementering is 'n netto besparing van R6 318 775 vir die Korporasie gerealiseer.

Toe daar met die herwinning van die kooks begin is, het daar na raming sowat 150 000 ton afgeskryfde gemengde kooks by die Suidwerke gelê, waarvan ongeveer die helfte as herwinbaar vir benutting beskou is. Die res was te fyn vir enige gebruik. 'n Doeltreffende mobiele sifaanleg is tweedehands teen betreklik lae koste by 'n myn aangeskaf en by die kooksstapel opgerig, waar dit teen lae lopende koste bedryf word. Later is die herwinningsgedagte na fynkookshope in die Noordwerke uitgebrei, waar ook 'n sifaanleg opgerig is. Hier was 'n reserwe van sowat 200 000 ton gemengde kooks beskikbaar.

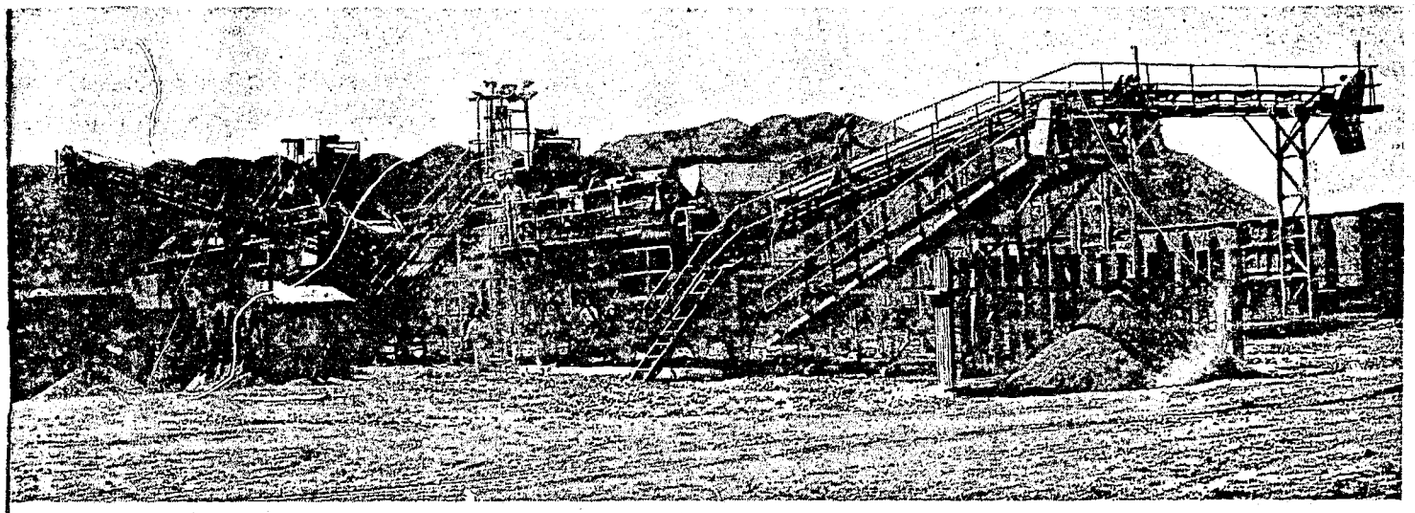
Die kooksneute en -ertjies word hoofsaaklik in die legeringsbedryf gebruik en hoewel daar nog fynkooks uit die kooksoonde bygevoeg word, word tans beraam dat die beskikbare voorrade nog sowat twee jaar sal hou. Die vraag ontstaan waar die legeringsbedryf daarna fynkooks sal kry.

Dr. Raats meen dat dit 'n verdere moontlikheid vir die Korporasie bied om sy produktiwiteit te verhoog. Sedert die Newcastle-werke beplan is, het sekere veranderings en verbeterings in die hoogoondpraktyke plaasgevind wat die beskikbare verkooksingsgeriewe met 'n groter vermoë laat as wat die werke nodig het. Dit kom daarop neer dat selfs al sou die werke met huidige fasiliteite tot maksimum produksie oorgaan, daar 'n onbenutte verkooksingsvermoë sal wees. Vanweë sekere probleme is die maksimum produksie nog nie deur die kooksoonde bereik nie, maar hierdie probleme sal uiteindelik uitgestryk word. Dan sal òf 'n oormaat kooks geproduseer kan word òf kapasiteit sal onbenut gelaat moet word.

Dr. Raats meen dat die oorskotvermoë gebruik kan word om doelbewus vir die legeringsbedryf te produseer. Dit sal die legeringsbedryf se probleme oplos om fynkooks te vind wanneer Yskor se huidige voorrade uitgeput is en vir die Korporasie volle benutting van sy verkooksingsvermoë in die Newcastle-werke verseker.

Intussen gaan die sifproses by die hope gemengde kooks onverpoos voort, en 'n oplewing in die legeringsbedryf het daartoe gelei dat onlangs gedurende een kalendermaand ongeveer R1,4-miljoen se fynkooks gelewer is. Op 'n jaargrondslag bereken, sou dit neerkom op 'n inkomste van R16,8-miljoen vir die Korporasie. Die fynkooksmark waaruit die legeringsbedryf voorsien word, toon egter aansienlike skommelings, maar die Newcastle-werke is gereed om solank die voorrade hou, genoeg kooks te lewer al sou die mark nog skerper styg.

● Die NPI het onlangs na 'n deeglike studie van die Korporasie se bedrywighede bevind dat Yskor sy produktiwiteit oor die afgelope drie jaar in reële terme met ongeveer 5 persent per jaar verhoog het. Daardeur is die bevindings van Yskor, wat omvattende beheerstelsels gebruik, bevestig dat verbeterde produktiwiteit in belangrike individuele bedryfsareas plaasgevind het. Doeltreffende kosteverbeteringsprogramme wat oor die jare ingestel is, het tot hierdie verhoogde produktiwiteite bygedra.



Die sifaanleg in die Newcastle-suidwerke.

The screening plant at the Newcastle South Works.

Briefly

A SUGGESTION for the productive utilization of an existent resource, whereby Iscor gained more than R6 million in the first year of its implementation, may in future lead to more productivity improvements. The idea was submitted by Dr. E. Raats, Manager, Metallurgical Division, Newcastle Works, who recently received a certificate of merit for it from the National Productivity Institute (NPI).

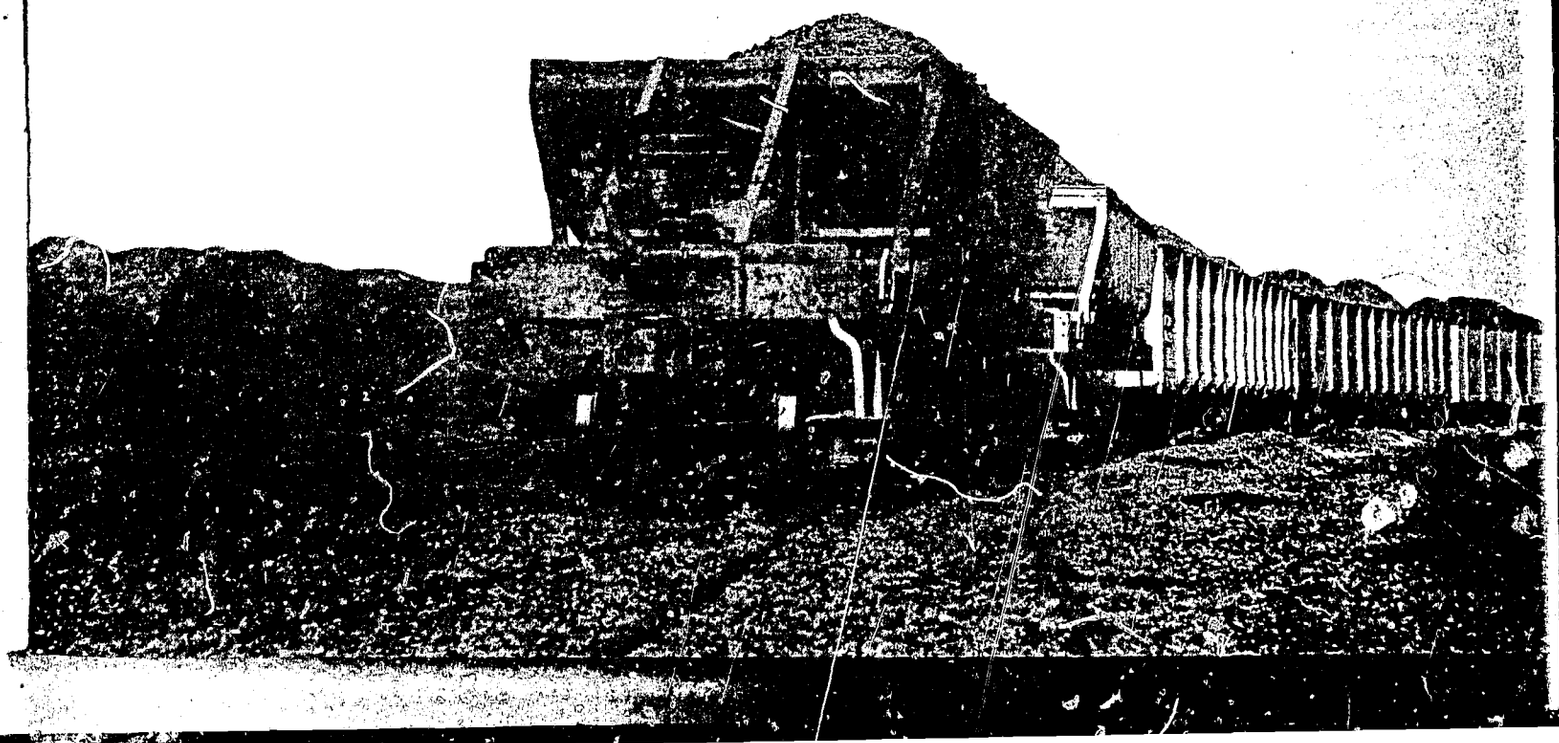
As a result of the suggestion, coking coal written off as too fine to be used in the blast furnaces at the Newcastle Works and which had been dumped in the veld, is being screened and sold or exchanged for metallurgical coke. The supply is considered to be sufficient for another two years, and it is now being suggested by Dr. Raats that when the supply becomes exhausted, fine coke could be specially produced for the alloy industry — the main customer. This would solve the alloy industry's problem of finding suitable coke, and at the same time Iscor's expected extra coking capacity would be utilized. This excess capacity arose when new blast furnace practices, requiring less coke, were introduced after the works had been planned.

Kooksteenkool van verskillende fraksies wat deur die sifaanleg herwin is.

Coking coal of various fractions reclaimed by the screening plant.

Spoorwaens vol gesifte kooks, gereed vir versending.

Rail wagons filled with screened coke, ready to be dispatched.



KORTLIKS

NAGENOEG 20 ton Chromadek per maand word deur Ocean Manufacturing (Edms) Bpk gebruik om 'n vrieskas elke vier-en-'n-half minute te lewer. Vrieskaste in ses groottes vanaf 114 tot 430 liter en klein koelkaste word deur hierdie vervaardiger van New Germany in Natal geproduseer.

Yskor se Chromadek — voorafgeverfde versinkte staalfynplaat — word vir die buite-omhulsels van die kabinette gebruik en voorafgeverfde aluminium vir die binne-omhulsels.

Ocean Manufacturing het voorheen koudgewalste en versinkte fynplaat gebruik en die vrieskaste is na vervaardiging geverf.

A freezer every four-and-a-half minutes

USING ABOUT 20 tons a month of Chromadek prepainted galvanized steel sheet, Ocean Manufacturing (Pty) Limited, of New Germany in Natal, produces a freezer every four-and-a-half minutes. In addition to the range of freezers varying in size from small models suitable for domestic use to a semi-commercial unit, this firm also makes refrigerators.

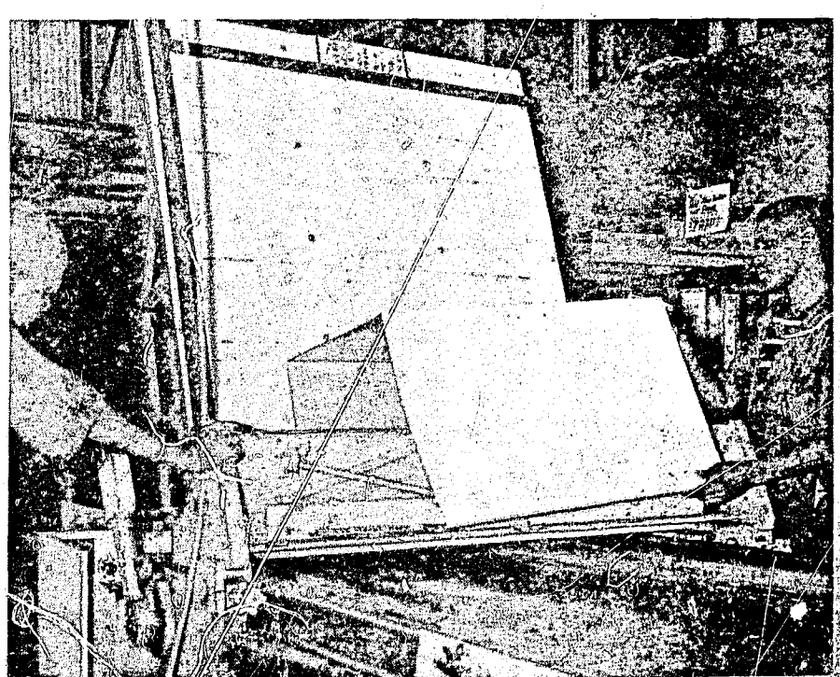
The manufacture of freezers at Ocean Manufacturing has passed through three stages in the use of various materials. When manufacture began, the firm pioneered the use of panelyte, in combination with extruded aluminium sections. This hard melamine material proved to be suitable for this purpose — it was corrosion resistant, particularly in coastal regions, and its glass-hard surface resisted surface damage.

A major change in the freezer market resulted in a switch to the production of steel cabinet freezers. This began when a large manufacturer of steel cabinet freezers went

A completed freezer.
'n Voltooide vrieskas.

Chromadek being bent to form the outer shell of a freezer.

Chromadek word gebuig om die buite-omhulsel van 'n vrieskas te vorm.



out of production, causing a gap between the supply and the growing demand for this type of unit. Entering this field, Ocean Manufacturing had to restructure its manufacturing process considerably. At first, cold-rolled or galvanized sheet was cut and then coated before forming and other manufacturing processes.

When difficulties were experienced through damage to the surface of units during manufacture, the process was modified to paint the cabinet surfaces after manufacture. At this stage Iscor cold-rolled or galvanized sheet was used.

The advent of Chromadek — produced on Iscor's modern continuous coil-coating line, where the strip is cleaned and chemically treated to ensure good paint adhesion and corrosion resistance, and the primer and final paint finish are cured under controlled conditions — offered the advantage of a prepainted surface resistant to various testing manufacturing processes such as roll forming, deep drawing and stamping.

Chromadek is used successfully in the production of a range of six sizes of freezers, from 114 to 430 litres. The largest of the range is a semi-commercial unit and is robustly made to withstand the rough handling to which it is likely to be subjected. Chromadek is used for the outer shell of the units and coated aluminium for the inner cabinet shell. A new innovation is the use of Textradek — a steel sheet with a pressure-bonded, plastic laminate coating — for the manufacture of freezer lids.

Chromadek is bought in coil form and decoiled and cut to length

The mechanical and electrical components are installed.

Die meganiese en elektriese onderdele word geïnstalleer.

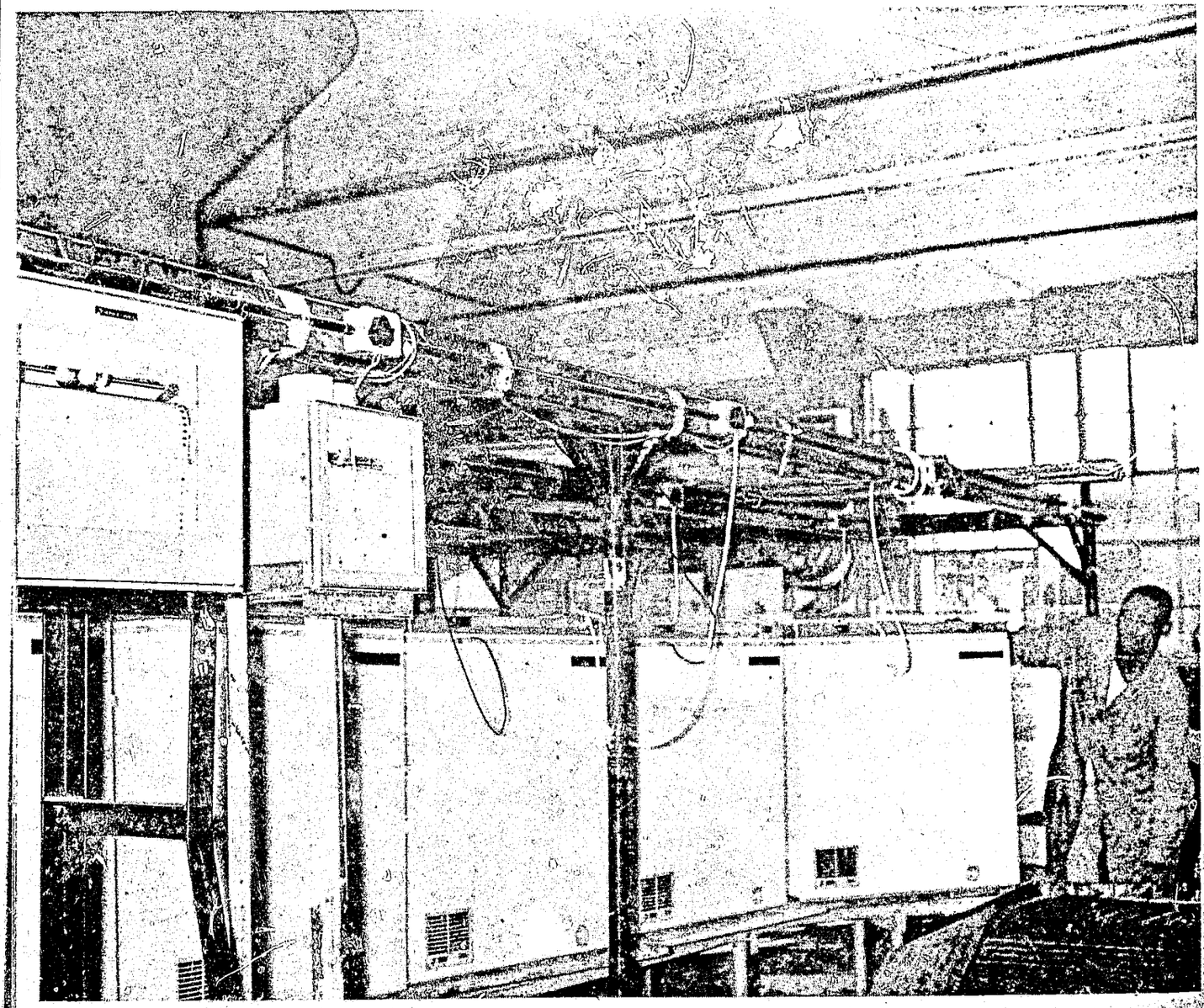
according to the size of the freezer. The height of the range of units is standard and is determined by the width of the coil. The cut sheet is formed to produce the outer shell of the cabinet. The inner shell is cut and formed in the same way and the refrigeration piping fixed to it. The inner shell is then placed in the outer shell and the cabinet is ready to receive the insulation core, which is injected in liquid form. The approximate cupful of liquid gasifies and expands rapidly to fill every corner between the outer and inner shells before solidifying to form a porous insulating material.

Because of the tremendous expansive force generated during this process, the cabinet is clamped into a tightly fitting container and the inner shell is braced by wooden struts. These are removed when the insulation has set. The compressor and other mechanical and electrical components are installed and the units are electronically tested before packing for dispatch.

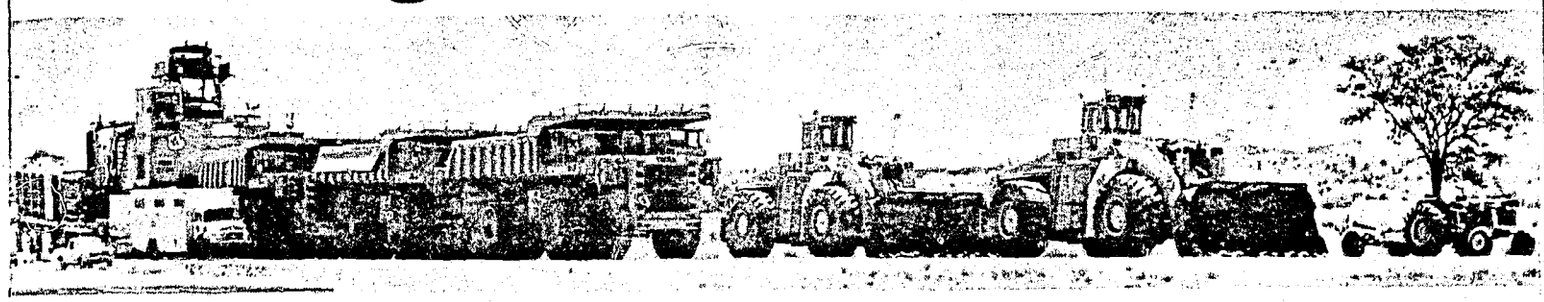
Ocean Manufacturing now claims a substantial share of the South African freezer market. In addition to its own branded products, Ocean and Clipper, which denote de luxe and standard models, the company also manufactures a number of brand makes for leading furniture and appliance chains.

Freezers being tested by electronic equipment.

Vrieskaste word met elektroniese toerusting getoets.



Die ‚groot trek'



met groot toerusting

Die konvooi vertrek vanaf Grootegeluk op sy lang reis na Thabazimbi. Heel voor is 'n trekker met tenksleepwaentjie, gevolg deur twee Le tourneau-vooremmerlaaiers, drie Terex-vragwaens, die P & H-laaigraaf en die mobiele „kragstasie". Langs die agterste Terex is die vragwa met smeertoerusting. Let op die grootte van die gewone voertuie heel links.

The convoy departs from Grootegeluk on its long journey to Thabazimbi. In the lead is a tractor with tank trailer, followed by two Le tourneau front-end loaders, three Terex trucks, the P & H shovel and the mobile "power station". Next to the last Terex is the lubrication truck. Note the size of the ordinary vehicles on the extreme left.

BRIEFLY

THE recent transfer of heavy mining equipment from Iscor's Grootegeluk coal mine to the Donkerpoort open pit at Thabazimbi was, as far as is known, the largest operation of its kind ever undertaken in the Western World. The transfer was decided upon after planning indicated that the machines which were standing idle at the Grootegeluk coal mine as a result of adjustments in the corporate plan in connection with coal supply, could be used in the Thabazimbi layout in a neccessary waste stripping programme.

The equipment consisted of a P & H 2300 electrical shovel with a total mass of 650 tons, three 150-ton Terex rear-dump trucks, two Le tourneau front-end loaders, each with a capacity of 10 m³, a mobile workshop and a lubrication truck. A mobile 1 000 kW "power station", consisting of a power plant mounted on a low-bed trailer, was linked to the shovel to keep the latter's automatic lubrication system going and to provide power to the shovel's drive motors in emergencies.

Since it would have been too costly and time-consuming to dismantle the giant shovel and then transport it to Donkerpoort, it was decided to remove only the counterweights and boom and bucket assembly and to haul the shovel with two Terex trucks.

The shortest and most suitable route was worked out beforehand. The convoy took 11 days to cover the 130 km from Grootegeluk to the Donkerpoort workshops and another 53½ hours to move up the mountain to the open pit.

Temporary camps were erected along the route to house the accompanying personnel. The convoy was followed by a team consisting of a bulldozer, two graders, three trucks and a front-end loader, which repaired any damage to the provincial road.

DIE VERSKUIWING deur Yskor-personeel van mynboutoerusting wat vanweë die geweldige grootte van die betrokke masjinerie en die omvang van die projek as die „groot trek" bekend gestaan het, het onlangs van die Korporasie se Grootegeluk-steenkoolmyn na die Thabazimbi-ysterertsmyn plaasgevind. Soos met die Groot Trek van ouds, is daar weer geskiedenis gemaak, want sover bekend, is dit die eerste keer in die Westerse Wêreld dat sulke groot toerusting oor so 'n lang afstand verskuif is sonder om dit eers uitmekaar te haal.

Daar is op die oorplasing besluit nadat beplanning aangedui het dat die masjiene wat by Grootegeluk ledig gestaan het as gevolg van aanpassings wat in die korporatiewe plan ten opsigte van steenkoolvoorsiening gemaak is, by die Thabazimbi-uitleg in 'n noodsaaklike afvalstroopprogram gebruik kon word.

Aanvanklik was die gedagte om die reuse-laaigraaf af te takel en stuk-stuk na Thabazimbi te vervoer, waar dit dan weer aanmekaar gesit sou moes word. Vanweë die hoë koste en tydrowendheid van so 'n stap is die plan laat vaar en is daar besluit om die toerusting „op hul eie wiele" na Thabazimbi te laat loop.

Die toerusting het bestaan uit 'n P & H 2300-elektriese laaigraaf met 'n totale massa van 650 ton, 'n spoorwydte van ongeveer 8,7 m en 'n totale hoogte van 15 m; drie Terex-vragwaens met 'n vermoë van 150 ton elk; twee Le tourneau-vooremmerlaaiers met 'n vermoë van 10 m³ elk; 'n mobiele werkwinkel en 'n smeervragwa. Die rusperbande van die laaigraaf moes byvoorbeeld elke 45 minute gesmeer word.

Ten einde die laaigraaf ligter en laer te maak, is die teengewigte en die toring-emmer-kombinasie verwyder en afsonderlik na Thaba-

Twee Terex-vragwaens sleep die reuse-laaigraaf.

Two Terex trucks hauling the giant shovel.

zimbi vervoer. Dit het die massa tot ongeveer 300 ton en die hoogte tot 11,2 m, verminder.

Om die laaigraaf van elektriese krag te voorsien, is 'n kragopwekker met 'n vermoë van 1 000 kW van Sishen geleen en op 'n laebaksleepwa geplaas. Die mobiele kragstasie (die Voltswagen genoem) is agter aan die laaigraaf gekoppel met die hoofdoel om die outomatiese smeerstelsel van die laaigraaf deurlopend van krag te voorsien en om in noodgevalle, soos wanneer die laaigraaf onderweg sou vasval, krag vir sy eie elektriese aandrywing te voorsien. Daarbenewens is die meganiese grendeling van die koppelaars verwyder en die elektriese grendeling sodanig aangepas dat die links- en regsdraaibewegings van die laaigraaf onafhanklik kon geskied.

Twee van die Terex-vragwaens is gebruik om die laaigraaf te trek, aangesien meganiese en elektriese probleme sou opduik indien die laaigraaf so ver op eie stoom so sou moes beweeg. Nog 'n nadeel is dat die maksimum snelheid van die graaf, wanneer dit op eie krag loop, slegs sowat 1,5 km/h is. Die vooremmerlaaiers het nie alleen as mobiele bergplekke vir dromme olie, smeertoerusting, sleeptoue en elektriese kabels gedien nie maar kon ook, waar nodig, vir grondverskuiwing langs die roete gebruik word.

Uit die aard van die saak was die Korporasie verantwoordelik vir enige skade aan die openbare pad waarlangs die konvooi beweeg het en derhalwe het 'n stortskraper, twee padskrapers, drie 7-ton-vragwaens en 'n vooremmerlaaier die konvooi gevolg om herstelwerk te doen. Provinsiale verkeersbeamptes het ook die konvooi vergesel.

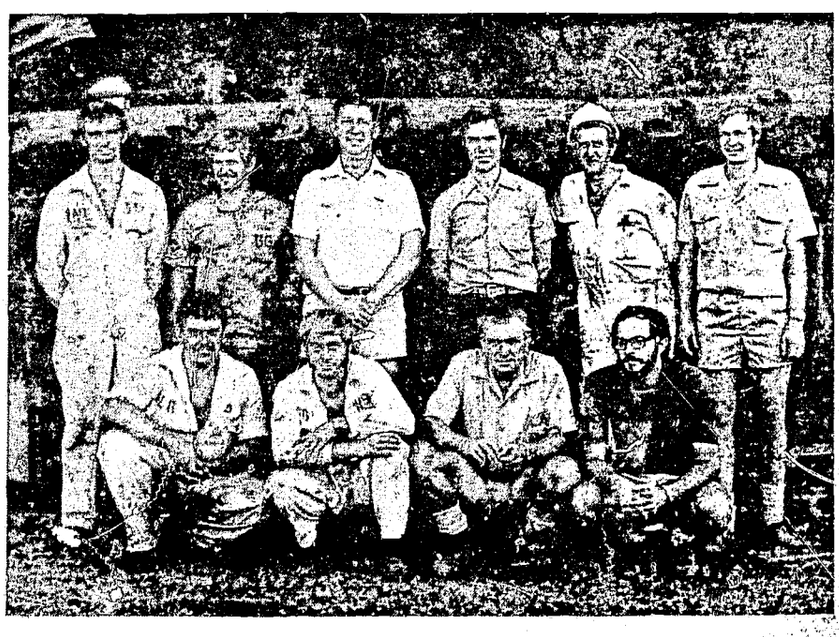
Die beste roete is vooraf deeglik verken en beplan. Op grond van die ondersoek is daar besluit dat die toerusting vanaf Grootegeluk die provinsiale grondpad sou volg tot waar hierdie pad die serwituutroete van die nuwe spoorlyn na Thabazimbi ongeveer 37 km van hierdie dorp af kruis. Vandaar is die serwituutroete gevolg tot ongeveer 5 km van Thabazimbi af. Dié laaste gedeelte tot by die Donkerpoort-werkwinkels het oor private eiendomme geloop en 'n spesiale pad, 10 m breed, moes vir hierdie afstand aangelê word. Die totale afstand van die roete is 130 km.

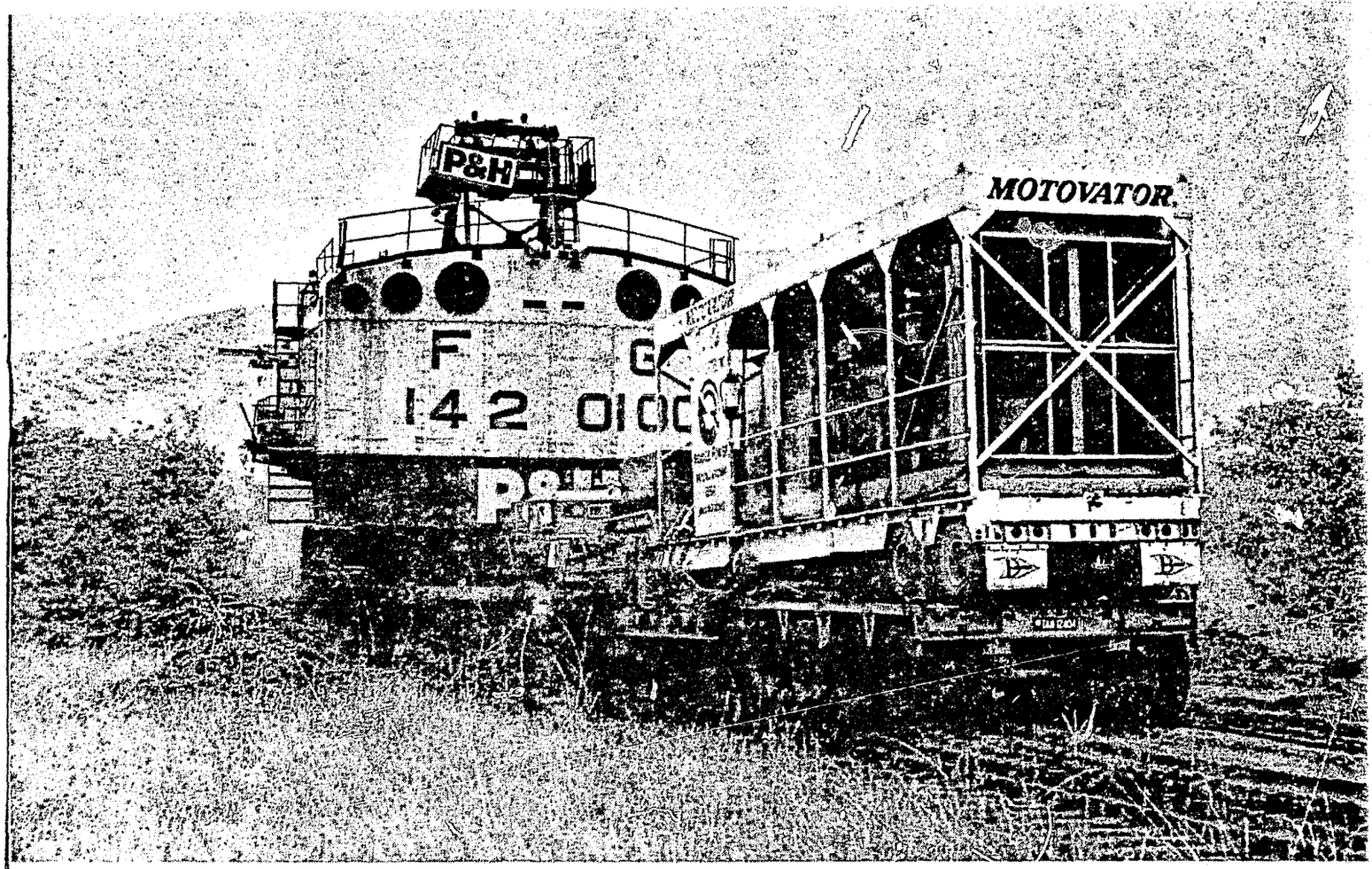
Benewens die feit dat die laaigraaf verskeie kere vasgeval het, veral nadat dit gereën het, moes daar ook talle ander probleme oorkom word. So het die Poskantoorpersoneel van Ellisras 'n besig tyd beleef, want telefoondrade moes plek-plek verwyder en nadat die konvooi verbybeweeg het, weer opgerig word. Naby Thabazimbi moes die laaigraaf onder die Evkom-kragleidings deurbeweeg. Om dit te kon doen, moes die grond onder die kragdrade 3,5 m diep en wyd genoeg vir die graaf verwyder word. Die krag kon nie afgeskakel word nie en derhalwe moes daar versigtig te werk gegaan word.

Een van die grootste struikelblokke was die oorsteek van die Matlabasrivier. Die bestaande laagwaterbrug kon nie gebruik word nie en 'n nuwe oorgang moes gebou word. Die taak moes vinnig geskied want op hierdie stadium het dit lig begin reën en indien

Die span wat verantwoordelik was vir die „groot trek". V.l.n.r. verskyn, voor: mnre. S. W. le Roux, W. Byleveld (Voorman), D. Nel (Spanleier) en M. Santapaga; agter: mnre. M. N. Eloff, P. Aucamp, K. Pretorius, D. de Klerk (Projekleier), C. Meyer en W. Jahn. Afwesig: mnre. R. Nel, C. Engelbrecht en H. Louw.

The team responsible for the "great trek". Appearing from the left, are, front: Messrs. S. W. le Roux, W. Byleveld (Foreman), D. Nel (Team Leader) and M. Santapaga; back: Messrs. M. N. Eloff, P. Aucamp, K. Pretorius, D. de Klerk (Project Leader), C. Meyer and W. Jahn. Absent: Messrs. R. Nel, C. Engelbrecht and H. Louw.





Die mobiele kragstasie wat die laaigraaf deurlopend van krag voorsien het.

The mobile power station which continuously supplied power to the shovel.

die rivier sou afkom, sou die oorsteek daarvan onmoontlik gewees het.

'n Siviele span van Grootegeluk met drie Wabco-vragwaens van 65 ton elk, 'n Le tourneau-vooremmerlaaier, 'n padskraper, 'n D8-stootskraper en 'n kompakteerder het aan die werk gespring nadat die nodige toestemming van die betrokke twee boere verkry is. Na slegs 4½ uur is die oorgang voltooi en om seker te maak dat die laaigraaf nie sou wegsak nie, het 'n Terex-vragwa met 'n vrag gruis 'n paar keer heen en weer daaroor gery. Daarna het die konvooi sonder enige probleme die rivier „droogvoets" oorgesteek.

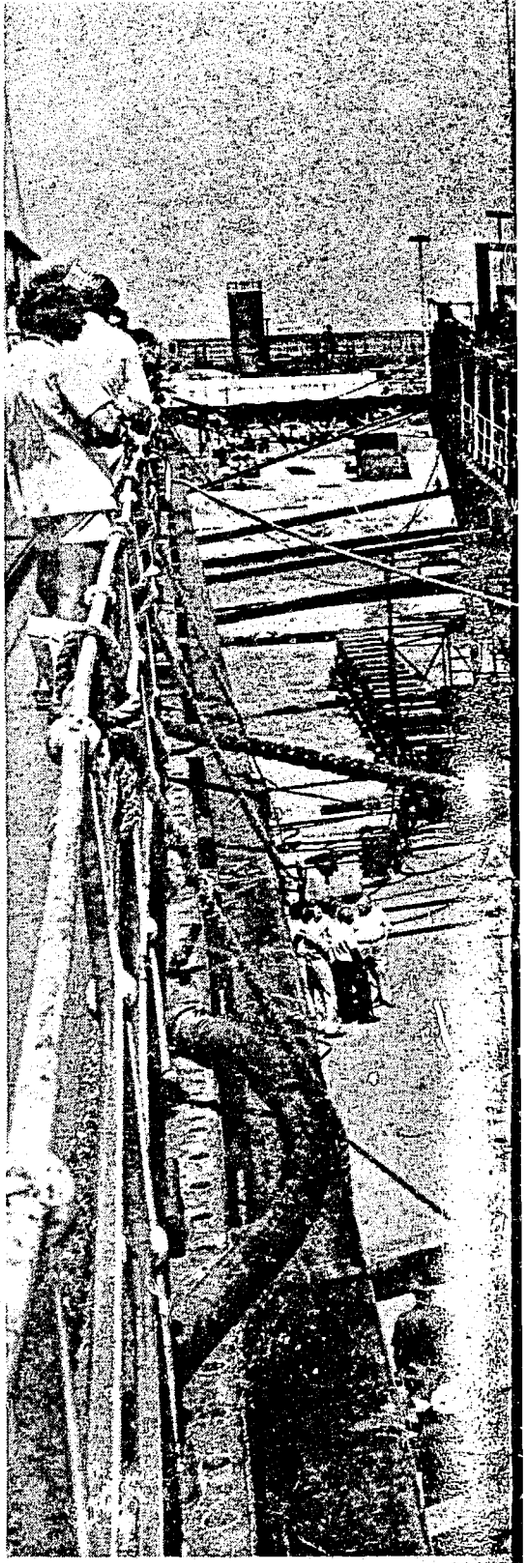
Elf dae nadat die groot trek Grootegeluk verlaat het, het dit die Donkerpoort-werkwinkels bereik. Die gemiddelde snelheid van die laaigraaf tot hier was nagenoeg 3 km/h, danksy die feit dat dit die grootste gedeelte van die reis deur twee Terexse gesleep is.

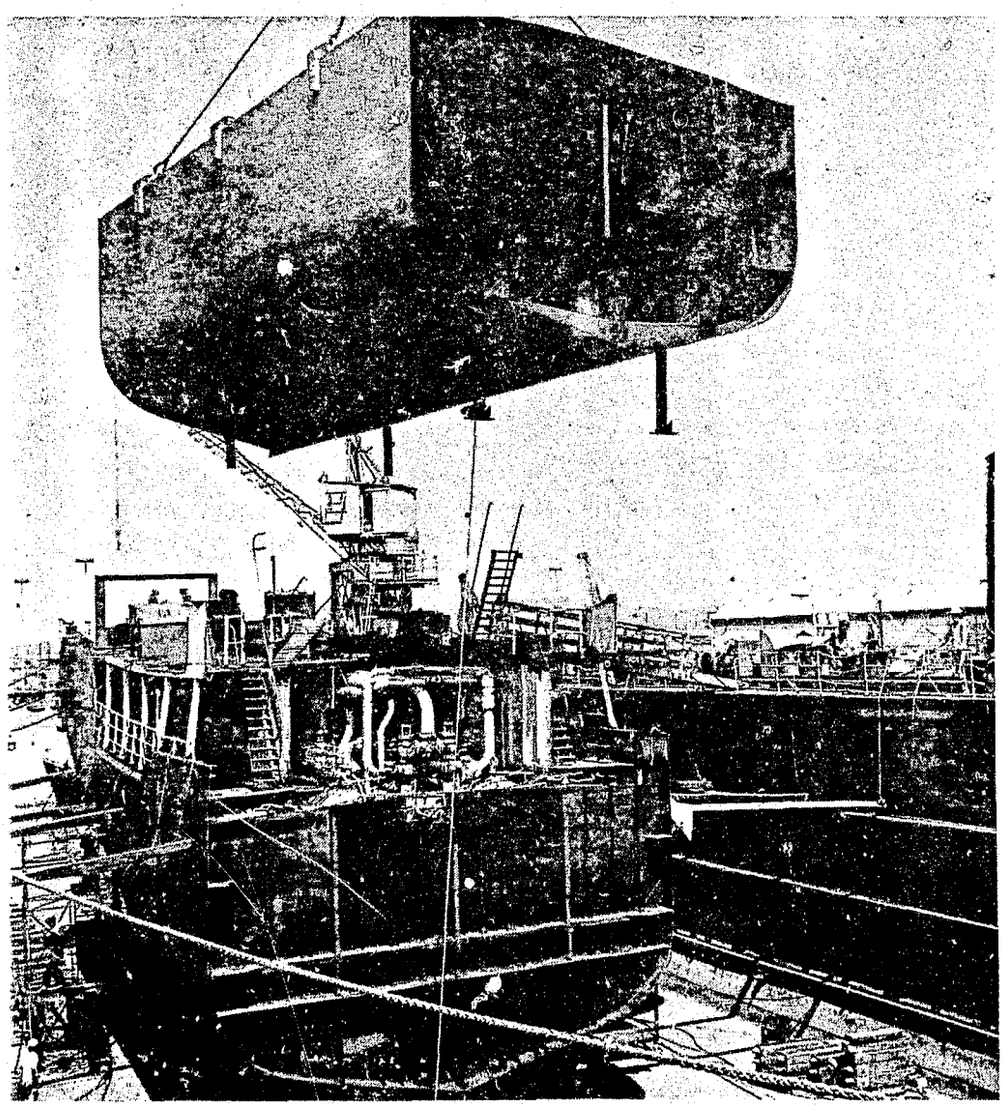
Die laaste struikelblok wat oorkom moes word, was om die „ou grote" bo-op die berg by sy nuwe werkplek te kry. Die reis berg-op het die laaigraaf hoofsaaklik op eie krag aangedurf, maar plek-plek het hy vasgeval en moes die trekkrag van die Terexse ingespan word. Na 53½ uur se gespook was die laaigraaf in die Donkerpoortgroef en 38 dae nadat hy vanaf Grootegeluk vertrek het, was hy gereed om in Donkerpoort te begin werk.

Die konvooi kon natuurlik nie vanself beweeg nie — voorsiening moes gemaak word vir die nodige personeel bestaande uit operateurs en 'n instandhouding- en siviele span. Die hele operasie „groot trek" het onder die leiding van die projekleier, mnr. D. de Klerk, gestaan. Op strategiese plekke langs die roete is kampe opgerig waar die personeel kon ontspan en oornag. Voedsel is berei in 'n „veldkombuis", wat bestaan het uit 'n omskepte springstofwa. Die personeel is in woonwaens gehuisves, en badkamergeriewe met warm en koue water is voorsien. Swart klerke het 'n mobiele beplanningskantoor beman. Hulle het die nodige instandhoudingskedules opgestel en ook daagliks die vordering aangeteken.

Danksy deeglike beplanning, goeie spangees en die vindingrykheid en deursettingsvermoë van die betrokke personeel, is die verskuiwing nie alleen suksesvol nie maar ook teen geweldige koste- en tydbesparings vir die Korporasie deurgevoer. Die groot trek staan as 'n unieke prestasie in Yskor se mynbougeskiedenis aangeteken.

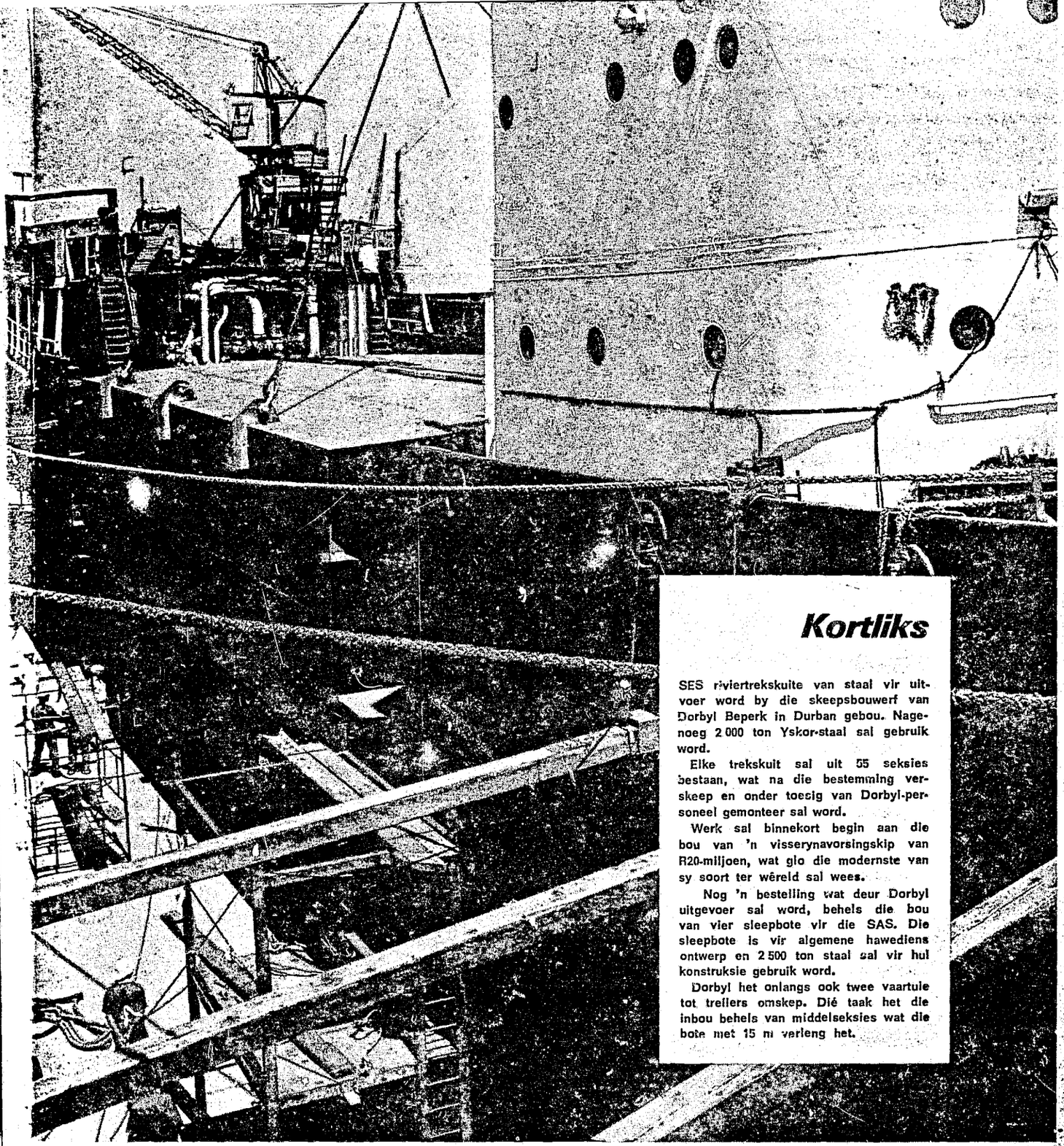
Ship-building active in Durban





A new middle section being lowered to lengthen the vessel by 15 m. The ship is one of two converted into trawlers by Dorbyl.

'n Nuwe middelseksie word laat sak om die vaartuig met 15 m te verleng. Die skip is een van twee wat deur Dorbyl tot treilers omskep is.



Kortliks

SES riviertrekskuite van staal vir uitvoer word by die skeepsbouwerf van Dorbyl Beperk in Durban gebou. Nagenoeg 2 000 ton Yskor-staal sal gebruik word.

Elke trekskuit sal uit 55 seksies bestaan, wat na die bestemming verskeep en onder toesig van Dorbyl-personeel gemonteer sal word.

Werk sal binnekort begin aan die bou van 'n visserynavorsingskip van R20-miljoen, wat glo die modernste van sy soort ter wêreld sal wees.

Nog 'n bestelling wat deur Dorbyl uitgevoer sal word, behels die bou van vier sleepbote vir die SAS. Die sleepbote is vir algemene hawediens ontwerp en 2 500 ton staal sal vir hul konstruksie gebruik word.

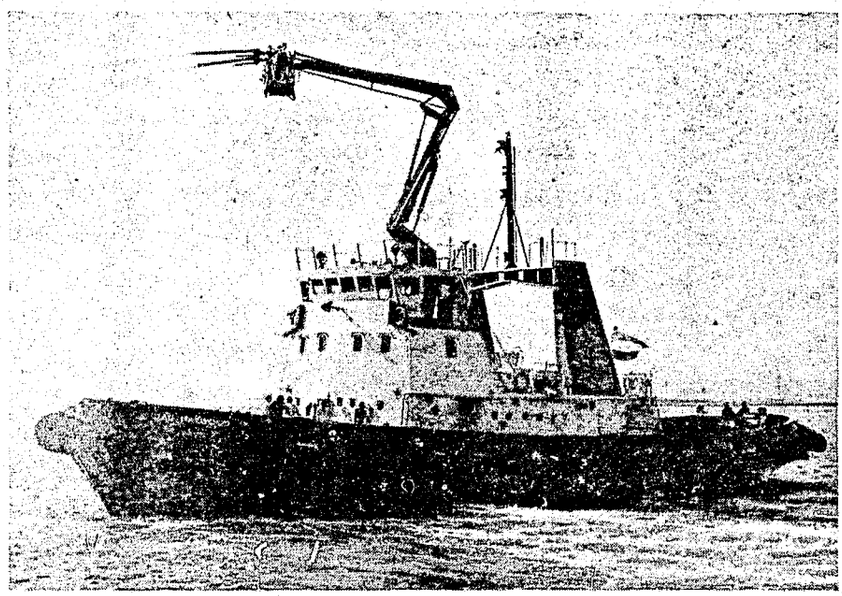
Dorbyl het onlangs ook twee vaartuie tot treilers omskep. Dié taak het die inbou behels van middelseksies wat die bote met 15 m verleng het.

SIX STEEL river barges for export are being fabricated in the Durban Bayhead yard of Dorbyl Limited. About 2 000 tons of Iscor steel will be used to build these vessels.

Each of the barges, 81 m long, 12 m wide and 2,6 m deep, will consist of 55 sections, most of which will be fabricated in jigs to achieve high tolerances. The barges will be trial-assembled at the Dorbyl yard, and the sections will then be dismantled and shipped for reassembly at the destination. This latter operation will be supervised by Dorbyl personnel.

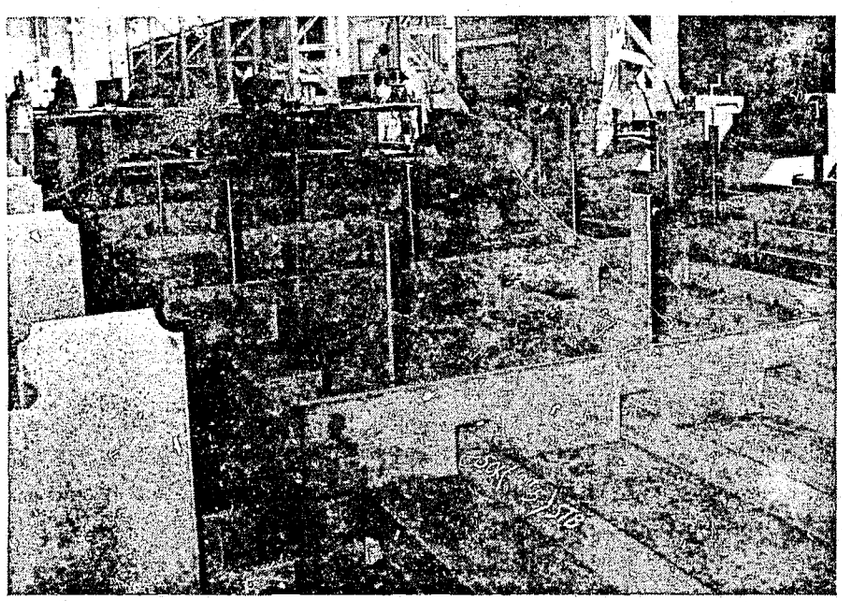
This is one of a varied programme of current, future and recently completed ship-building projects in the Dorbyl order book, obtained in the face of vigorous overseas competition stimulated by a general decline in activity in the ship-building industry.

Another plum order is that for a R20 million fisheries research vessel, which will begin to take shape shortly and is scheduled for commissioning during the early part of 1981. It is claimed that this ship will be the most sophisticated fisheries research vessel afloat. It has been designed in Scotland as a multi-purpose ship equipped for hydrographic and



A tug similar to the four which will be built by Dorbyl for the SAR.

'n Sleepboot soortgelyk aan die vier wat deur Dorbyl vir die SAS gebou sal word.



One of the six river barges for export begins to take shape at the Durban shipyard of Dorbyl Limited.

Een van die ses riviertrekskuite vir uitvoer begin vorm aanneem by die Durbanse skeepsbouwerf van Dorbyl Beperk.

biological research, fishing and fish-finding operations within an area extending from the summer pack-ice in the south and the Equator in the north and from the South American continent in the West to Australia in the east. The 77,8 m long vessel will have a range of 14 000 nautical miles at a service power of 1 417 kW and will be equipped to stay at sea for 90 days.

It will be built as a single-screw trawler with two continuous decks, an extended forecastle and a three-tier midship house. It will have a transom stern with a built-in ramp. The trawler will have a crew of 34, and accommodation and a work area comprising eight laboratories and an operations room will be provided for scientific personnel.

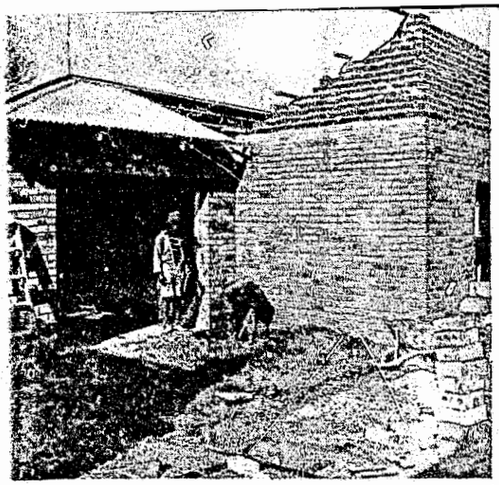
Propulsion will be provided by a diesel-electric combination, consisting of three diesel engines driving DC generators to power a constant-current DC propulsion motor directly connected to a fixed-pitch propeller. Vibration transmitted through the hull will be reduced by mounting the main diesel engines, propulsion generators, ship's service generators and auxiliary machinery on a raft flexibly supported from the ship's structure, with most significant noise producing units located in an acoustic enclosure.

The ship will be classified Lloyds Grade A and the hull will be strengthened forward with extra frames whilst plating below the water-line will be 19 mm thick. This will enable the trawler to operate safely in the pack-ice which will be encountered towards the southern boundary of its operational area. About 1 300 tons of Iscor steel will be used for its construction.

A bow-thruster, which can be retracted into the hull, will enable the trawler to maintain its position in the most adverse weather conditions. Manoeuvrability will be enhanced by a sophisticated steering system, with the rudder angling to 90 instead of the conventional 35 degrees.

Another order, which will involve about 2 500 tons of Iscor steel, is for four harbour tugs required by the South African Railways. The tugs will do general harbour work but are to be equipped for limited sea going. These 35,6 m long vessels will be powered by two MAN engines, each developing 1 600 kW at 1 000 r/min. Equipped with Voith-Schneider propellers, the tugs will have a speed of 12 knots.

A recently completed project consisted of converting two vessels into refrigerated stern trawlers. The vessels were cut through amidships and a midsection was added, increasing the length of the vessel by 15 m. The vessels have been fitted with stern ramps and have been equipped to process their new catches.



'n Huis wat meer as 30 jaar gelede gebou is, word opgeknap. In sommige huise, soos hierdie een, word die kombuis vergroot.

A house built over 30 years ago is rejuvenated. In some houses, like this one, the kitchen is enlarged.

Ruim muurkaste word in die slaapkamers van die opgradeerde huise ingebou.

Spacious wall cupboards are built into the bedrooms of the upgraded houses.

Verjongingskuur vir 3 000 wooneenhede

'N REUSE-PROJEK waarin voorsiening gemaak word vir die opgradering van ongeveer die helfte van die 6 465 huurwooneenhede wat Yskor tans op Vanderbijlpark besit, is onlangs van stapel gestuur.

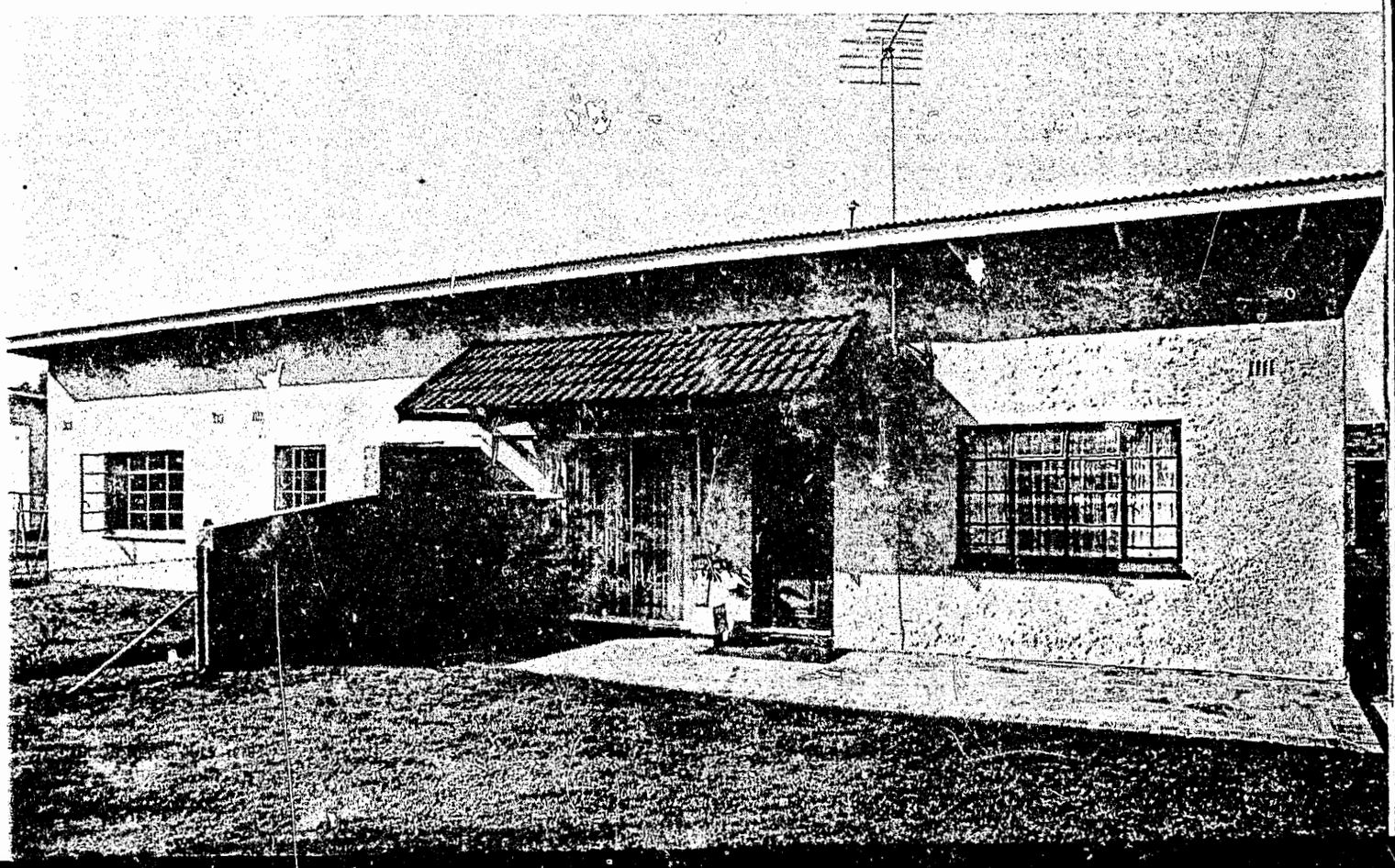
Die eerste deel van die program behels die opgradering van 155 eenhede in een van die dorp se oudste woonbuurte, CW 6, waar die eerste huise 32 jaar gelede gebou is. Die eerste fase sal na verwagting sowat R1,1-miljoen kos.

Nog sowat 100 eenhede sal dringend aandag moet ontvang, waarna 'n verdere 3 000 eenhede mettertyd, in mindere of meerdere mate, verbeter sal word.

Van die 6 465 huureenhede is bykans een derde, nl. 2 142, sedert

Vooraansig van die eerste skakelhuis wat in CW 6, Vanderbijlpark, opgradeer is. Let op die groot venster wat in die sitkamer ingebou is en die muurtjie wat met die oog op privaatheid opgerig is.

Front view of the first semi-detached house to be upgraded in CW 6, Vanderbijlpark. Note the large window built into the sitting-room and the wall erected for privacy.



Dupleks-eenhede wat onlangs opgerig is en deel uitmaak van 'n hoëdigtheidskompleks in SW 1. Daar bestaan 'n groot vraag na hierdie eenhede.

Recently erected duplex units which form part of a high-density complex in SW 1. These units are in great demand.

Briefly

A GIANT project to upgrade about half of Iscor's 6 465 housing rental units at Vanderbijlpark, was launched recently.

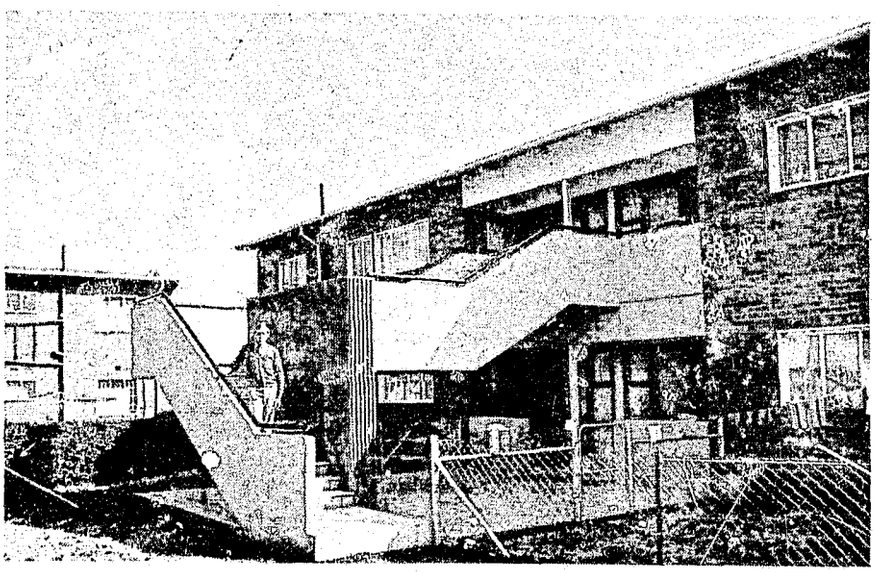
The first phase, which is expected to cost approximately R1,1 million, includes the upgrading of 155 units in one of the town's oldest suburbs, CW 6, where the first houses were built 32 years ago. A further 100 units need urgent restoration, whilst about 3 000 units requiring major or minor improvements are to be upgraded in due course.

Of the 6 465 rental units, the total municipal valuation of which exceeds R100 million, 2 142 have been built since 1971, and they are in great demand. The oldest units, having few modern conveniences, have become less acceptable to tenants.

The upgraded units will soon become available at a rate of about 16 a month.

Ou woonstelle sal ook opgradeer word. Die aantreklike trap op die foto is gebou vir toegang tot die boonste woonstel.

Old flats are also to be upgraded. The attractive staircase in the photo was built for access to the top flat.



1971 opgerig, en hulle beskik almal oor moderne geriewe. Van die totaal is 4 864 huise, 431 skakelhuise, 951 woonstelle en 219 dupleks-eenhede. Die munisipale waardasie van almal bedra meer as R100-miljoen.

Die vraag na die nuwer eenhede is groot en daar is steeds waglyste. Die oudste eenhede beskik egter oor min moderne geriewe en word al hoe minder aanvaarbaar vir huurders.

Daar word voorsien dat die huise — en terselfdertyd die betrokke woonbuurte — deur opgradering meer aanvaarbaar gemaak sal word. Die oudste huise, wat almal nog stewige mure het en waarvan die erwe betreklik groot is, is naby die Yskor-werke geleë . . . 'n belangrige faktor in hierdie dae van hoë brandstofpryse.

Voordat die projek aangepak is, is huurders gevra om vraelyste in te vul ten einde te bepaal wat die vernaamste gebreke in die betrokke huise is. Uit die antwoorde het geblyk dat die volgende verbeterings noodsaaklik is:

- ingeboude kaste in slaapkamers;
- moderne geriewe in kombuise;
- opknapping van badkamers (vervanging van baddens, ou ketting-toilette, teëls, ens.); en
- modernisering van ligtoebehore.

By wyse van proefneming is twee wooneenhede verlede jaar opgradeer, en 'n opname daarna het getoon dat die „verjongingskuur" hulle wel vir huurders aanvaarbaar gemaak het.

Die opgradeerde tweeslaapkamer-skakelhuise in CW 6 sal binnekort teen 'n tempo van 16 per maand beskikbaar gestel word, en na verwagting sal hulle deur jonggetroudes en egpare met hoogstens twee kinders betrek word.

Nadat die werk aan die huise in 'n straat voltooi is, sal die voorste heinings verwyder word. Grasperke sal van die straat af tot teenaan elke huis aangeplant word, en struike sal ook geplant word. Die buitegeboue word opgeknap en betonstroke aangebring, by voorbeeld van die straat na die motorhuis. 'n Hek sal langs elke huis aangebring word sodat die agtererf afgesluit kan word.

Die plaaslike stadsraad verwelkom die projek en bied sy samewerking, byvoorbeeld met die sypaadjies en verligting. Die Vanderbijlpark-eiendomsmaatskappy (Vesco) is vir die tegniese werk en toesighouding verantwoordelik.

Vir nasorg word ook voorsiening gemaak. Personeellede van die seksie Bedryfsmaatskaplike Werk se Gemeenskapsorganisasie sal huurders besoek om hulle te motiveer tot betrokkenheid by die opgraderingsprojek.

Om Yskor se groot getal huureenhede op Vanderbijlpark in stand te hou, kos 'n aardige bedrag. In die jaar tot Maart vanjaar is sowat R1 975 000 aan instandhouding bestee, en in jare waartydens grootskaalse verfwerk gedoen word, soos tans die geval is, is die syfer nog heelwat hoër.

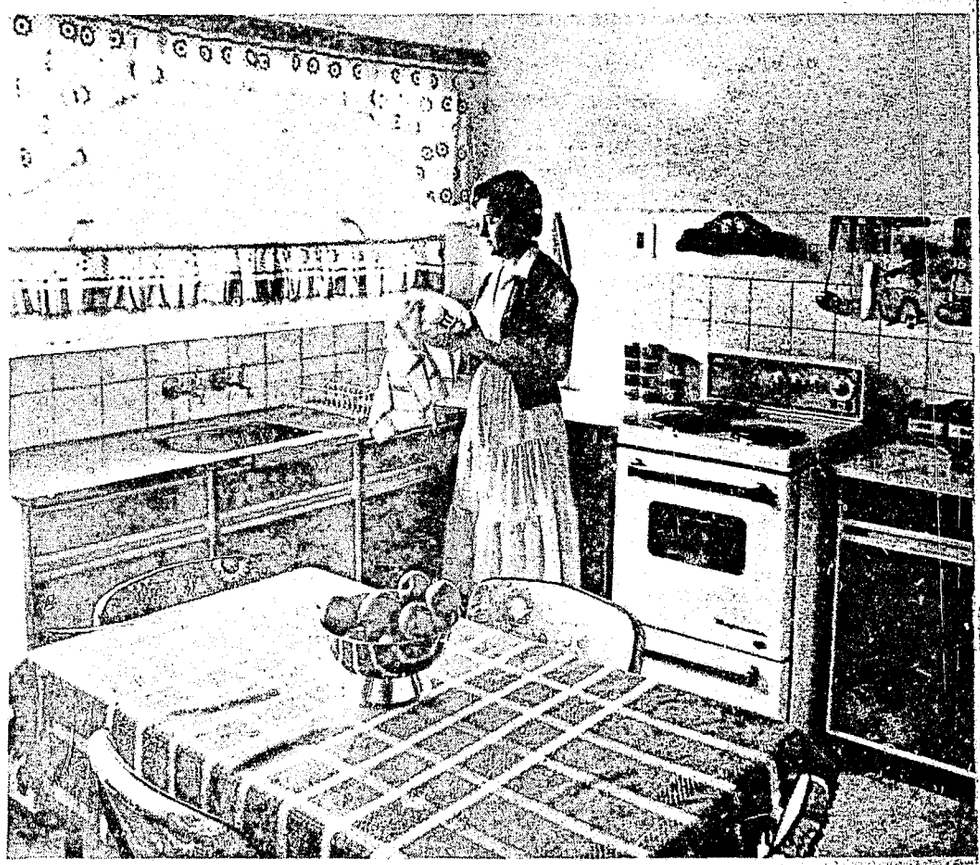
Dit is natuurlik altyd wenslik om oor verhuurde eiendom 'n ogie te hou. Yskor se Behuisingseksie op Vanderbijlpark het tans twee voltydse inspekteurs wat die huureenhede besoek, en die aanstelling van nog twee word beoog.

Tot 900 inspeksies word maandeliks uitgevoer om te probeer verseker dat eenhede op 'n aanvaarbare standaard en in ooreenstemming met die huurvoorwaardes bewoon word. Huurders word gemotiveer om persele te ontwikkel, en teen diegene wat eiendomme verniel, word opgetree.

Die geweldige groot rol wat Yskor speel in die verskaffing van huisvesting op Vanderbijlpark blyk uit die feit dat die Korporasie tot dusver, regstreeks (met huureenhede) en onregstreeks (deur die huiseienaarskema), verantwoordelik was vir 9 582 van die 14 692 wooneenhede op die dorp — nie minder nie as 65 persent!

Benewens die voorsiening van huureenhede en sy huiseienaarskema, waarkragtens werknemers huise kan koop of laat bou met lenings teen 'n lae rentekoers, het Yskor ook 'n jeugsentrum en 'n versorgingsoord vir kinders op die dorp. In die jeugsentrum kan 550 mense gehuisves word, en die huidige inwoners is hoofsaaklik vakleerlinge en produksiewerkers. Die unieke Ettie Coetzee-versorgingsoord, wat opgerig is om vir skofwerkende moeders se kinders voorsiening te maak, kan 300 kinders tussen die ouderdomme van drie maande en 12 jaar dag en nag huisves.

● Die feit dat Yskor, ook ten opsigte van behuising, die belange van sy werknemers op die hart dra, word weer eens bewys deur die omvattende opgraderingsprojek wat tans aan die gang is.



Mev. Alta Swanepoel in die aantreklike kombuis van die opgradeerde skakelhuis wat sy en haar man, mnr. N. J. J. Swanepoel, betrek het na hul huwelik vroeg vanjaar. Die paartjie, albei Yskor-werknemers, sê hulle woon lekker in die „nuwe" huis . . . en voel ook gelukkig dat hulle nie ver werk toe hoef te ry nie.

Mrs. Alta Swanepoel in die attractive kitchen of the upgraded semi-detached house into which she and her husband, Mr. N. J. J. Swanepoel, moved after their marriage early this year. The couple, both Iscor employees, say they enjoy living in the "new" house . . . and also feel happy that they do not have to travel far to work.

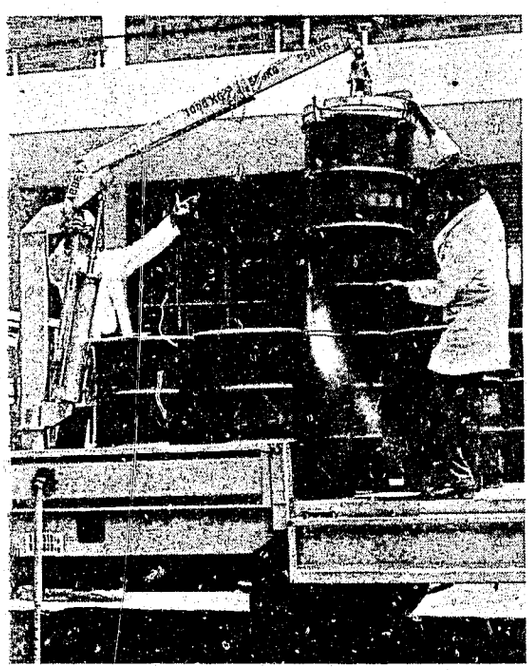
WIDEST RANGE OF FLOOR CRANES

A Skyworker hydraulic platform being used to work on a street light.

'n Skyworker-hidrouliese platform word gebruik om aan 'n straatlig te werk.

An Abbey truck loading crane being used at Kanvin Products (Pty) Ltd to off-load a 200 kg drum of fruit pulp, used in the manufacture of fruit juice.

'n Abbey-vragmotorlaaikraan word by Kanvin Products (Pty) Ltd gebruik om 'n drom met 200 kg vrugtepulp, wat by die vervaardiging van vrugtesap gebruik word, af te laai.



A YOUNG company, Prok Africa (Pty) Ltd, which commenced business in the Republic towards the end of 1976, is achieving great success with its floor cranes and related products manufactured mainly from Iscor steel. It was founded by an Australian concern, Production Equipment (Pty) Ltd, of which Abbey Engineering (Pty) Ltd, another Australian company, is a subsidiary. The activities of both these enterprises have been combined in the South African company, forming two divisions, one for bulk materials handling equipment and the other for hydraulic lifting equipment, such as floor cranes, work platforms and Skyworkers.

To set up the company, a manufacturing concern, Freton Engineering (Pty) Ltd, of Springs — where manufacturing currently takes place — and a contracting company, WSJ (Pty) Ltd, of Bedfordview — where the head office is situated — were purchased.

The floor cranes and related products are manufactured by the "Abbey" part of the concern, and the company claims to manufacture the widest range of floor cranes in South Africa. Production is carried out under licence from the Australian parent company, the know-how of which is available to Prok Africa. The company is proud of having brought to South Africa the high standards of safety, as well as other standards, laid down by the stringent provisions of the relevant Australian legislation governing factories and machines, to which it adheres under all circumstances.

According to the sales manager of the Abbey division, Mr. B. J. Kiekebosch, the equivalent South African legislation was vague as

far as these products were concerned. The South African measures covered a very broad spectrum of industry and were not concentrated on the field in which Prok Africa and its competitors were active.

The market for floor cranes had been almost "unexplored" when the company moved in, he said. Generally, South African industries were wrongly using fork-lift trucks for work which could be better performed by floor cranes. This attitude was still forming a barrier which Prok Africa had to overcome when recommending its products.

"Nothing can belie the well-known truth that the use of the right equipment for a particular operation increases productivity and hence profits," he stated.

The company's range of Abbey floor cranes embraces eight models, varying in capacity between ½ and 3 tons. Two of the cranes in the range, with capacities of 1 and 2 tons, are yard types — claimed to be the only yard-type cranes available in South Africa — and are fitted with pneumatic tyres for use on unsurfaced areas in factory yards. According to Mr. Kiekebosch, fork-lift trucks are often used for lifting operations in yards, whereas cranes are not only better suited for the task but also much cheaper. The price of a fork-lift truck could be about R13 000 or R14 000, in comparison with a floor crane's price of approximately R2 500.

Two 1-ton capacity models are ideally suited for mounting on 1½ and 2-ton bakkies (light delivery vehicles), whilst mounted on 4-ton trucks they also enjoy good acceptance.

Another range manufactured by the company is the WP (or work platform) series. According to the company, these platforms, the bases of which are mounted on wheels, are unique to this country and have features not seen in South Africa before. The basket in which the operator can hoist himself to work at a high level, can be projected forward of the extremities of the base structure. As a result, these platforms have many applications where conventional scaffolding cannot be used, for instance when machines are in operation. By using these platforms, work could be performed over running machines without danger or without interrupting production.

A ladder system running from the base to the basket, which makes it possible for the operator to climb up and down or for someone else to climb up to him, is another unique feature of these platforms. The units are fitted with 400 mm pneumatic tyres so that they may negotiate fairly rough terrain and may also be towed at 15 km/h.

The units are available in three different maximum heights from factory floor to floor of the basket — 4,5, 6,2 and 10,08 m. In addition, extension baskets to provide a further height of 1,2 or 1,83 m are provided for the 6,2 and 10,08 m platforms, respectively.

The range of Skyworkers varies from 7,9 to 30 m in working height and a unit can be delivered completely mounted on a vehicle or on a chassis supplied by the customer. As an extension to its Skyworker products, the company supplies fire-fighting equipment.

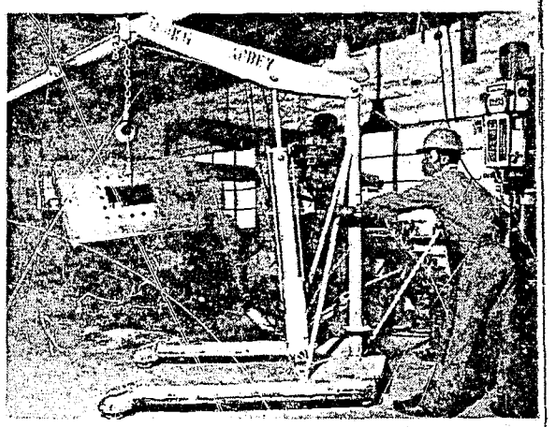
The hydraulic systems are fully self-contained units, and no hoses are used. Although production is carried out according to Australian design, equipment is adapted to South African conditions, where necessary, without sacrificing any safety standards. The local content varies between 70 and 90 per cent, depending on the equipment. The ultimate aim is to achieve a 100 per cent local content. Still being imported in all cases are the hydraulic cylinders which, owing to their uniqueness, are not locally available.

The company has distributors in Durban, Witbank, Phalaborwa and Bloemfontein and is still looking for agents in Cape Town and the Port Elizabeth and East London areas.

Kortliks

'N JONG onderneming van Bedfordview, Prok Africa (Edms) Bpk, behaal groot welslae met sy vloerhyskrane en verwante produkte soos hidrouliese werkplatforms en Skyworker-platforms, wat hoofsaaklik uit Yskor-staal vervaardig word.

Vervaardiging geskied kragtens lisensie van 'n Australiese onderneming, Production Equipment (Pty) Ltd, wat die Suid-Afrikaanse onderneming teen die einde van 1976 van stapel laat loop het en dit beheer. Prok Africa is trots daar ; dat sy produkte voldoen aan die standaarde wat deur die Australiese owerheid gestel word en bestempel dit as uiters hoog. Die produkte word onder die handelsnaam Abbey bemark.

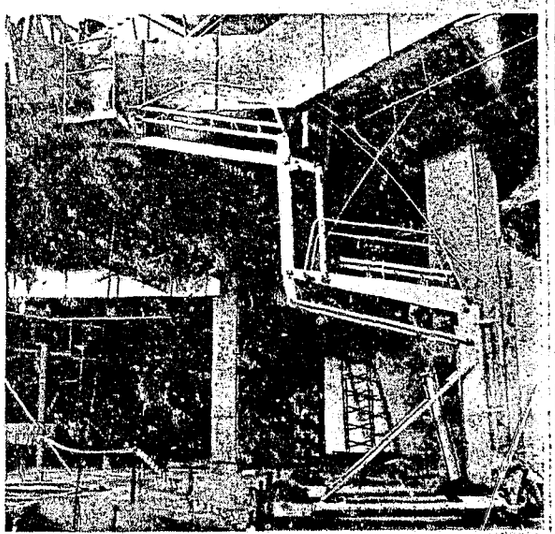


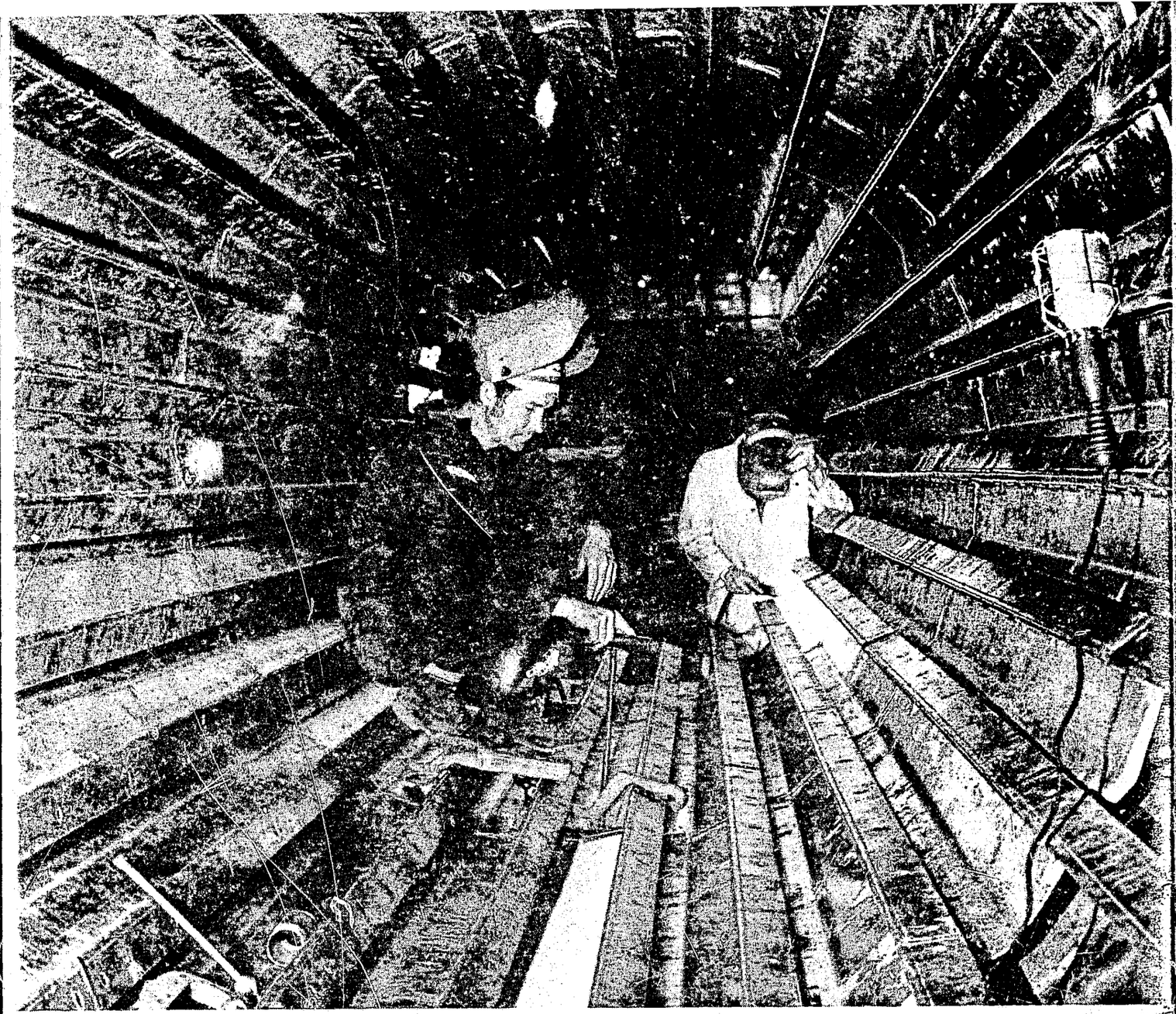
A floor crane built by Prok Africa to the high standards set by its parent company

'n Vloerkraan wat deur Prok Africa vervaardig is volgens die hoë standaarde wat deur die moedermaatskappy gestel word.

One of the models of Abbey work platforms, manufactured by Prok Africa.

Een van die modelle Abbey-werkplatforms, wat deur Prok Africa vervaardig word.





A drum for a rotary dryer of a chrome processing plant.

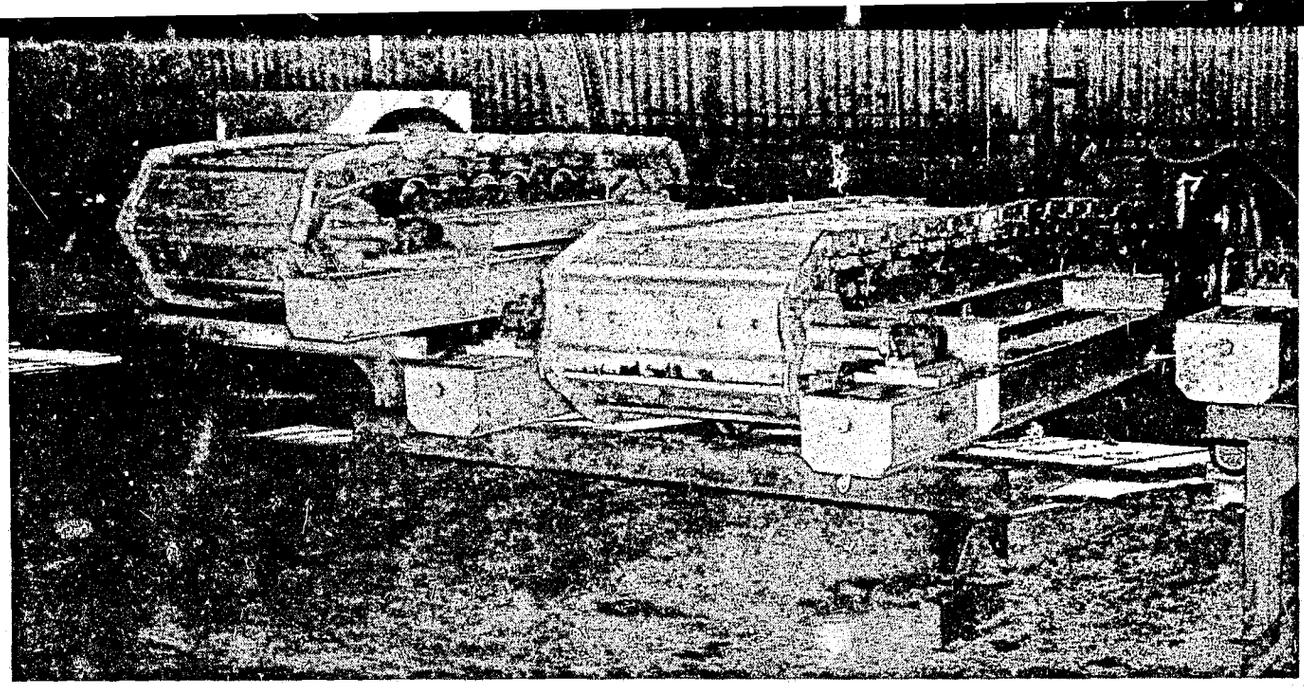
'n Trommel vir 'n draaidroër van 'n chroomverwerkingsaanleg.

Equipment for BULK handling

THE SPRINGS-BASED company of FMC South Africa (Pty) Limited has a history which dates back to 1951 when the former Link-Belt Africa Limited purchased the factory in New Era, Springs, for the purpose of establishing its own manufacturing, engineering and warehousing facilities.

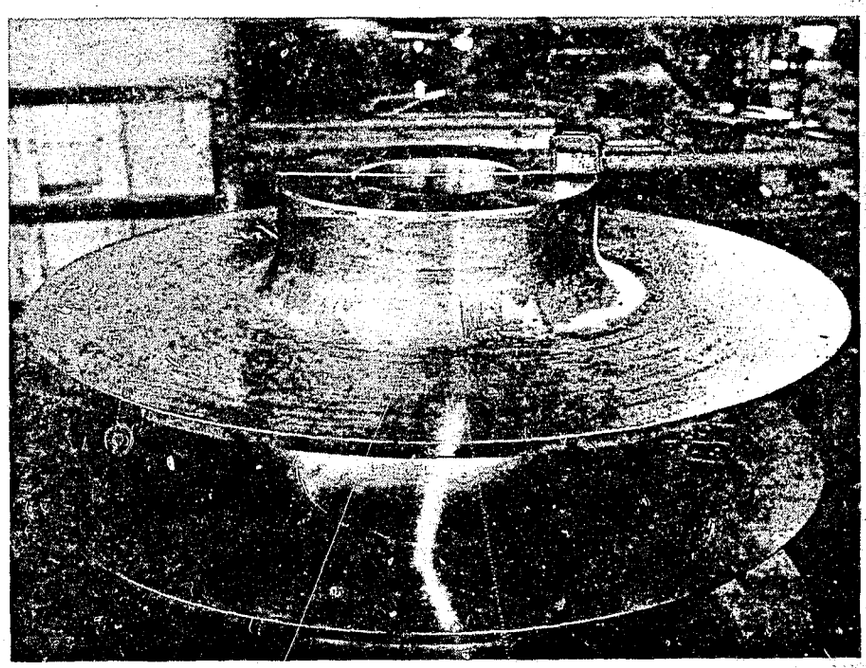
For more than 70 years the name "Link-Belt" has been well known in mining and industrial circles in South Africa and has been associated with bulk materials handling and power transmission equipment.

In 1968, FMC Corporation of the USA merged with Link-Belt Corporation and today the com-



Two Link-Belt 1 220 mm wide apron feeders, ready for export to Botswana.

Twee Link-Belt-skortvoerders van 1 220 mm wyd, gereed vir uitvoer na Botswana.



Machined components for belt conveyor pulleys destined for Iscor's Grootegeluk coal mine.

Gemasjineerde onderdele vir vervoerbandkatrolle bestem vir Yskor se Grootegeluk-steenkoolmyn.

bined concern ranks amongst the 100 largest companies in the USA, with an annual turnover approaching $3 billion.

The materials handling expertise of Link-Belt has continued to develop, and Link-Belt and Syntron (vibrating equipment) have been retained as brand names with a reputation for quality of design and manufacture and reliability and economy in operation.

FMCSA has its own engineering department and well-equipped factory which makes it independent of the US parent company. However, the vast experience and know-how of the older corporation is at the disposal of FMC operations in the Republic, thereby greatly expanding the range of services which the company can offer its customers. Only those components which for economical or technological reasons cannot be manufactured locally, are imported.

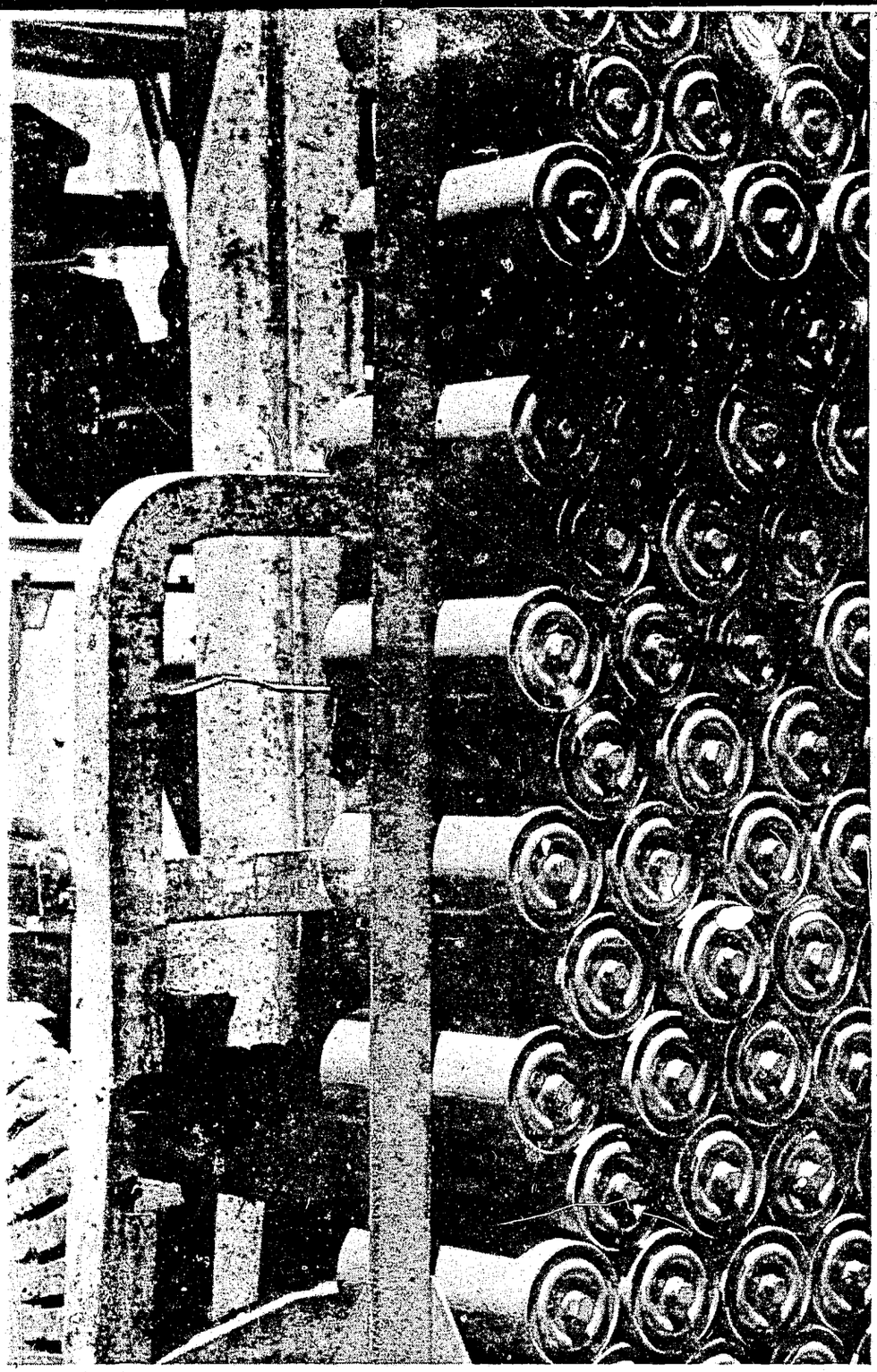
The major strength of the company lies in the very broad product range it can offer, although at this stage it represents only three major divisions of the US corporation — bulk materials handling, power transmission and environmental equipment.

The bulk materials handling equipment falls into two main categories. The materials handling systems section includes belt conveyors and associated equipment, apron conveyors and feeders, a

Kortliks

FMC Suid-Afrika (Edms) Beperk, 'n dogteronderneming van een van die 100 grootste maatskappye in die VSA, vervaardig tans 80 persent van sy produkreeks in sy fabriek op Springs. Dit behels 'n wye verskeidenheid toerusting vir die hantering en vervoer van grootmaatmateriale en verpakte produkte, kragtransmissietoerusting en aanlegte vir die beheer van besoedeling. Yskor-staal word op groot skaal tydens die vervaardigingsproses gebruik.

Hoewel die Suid-Afrikaanse onderneming onafhanklik bedryf word, kan gebruik gemaak word van die kundigheid en ervaring van die Amerikaanse moedermaatskappy, tot voordeel van plaaslike gebruikers van hierdie toerusting.



Conveyor idlers ready for dispatch.

Vervoerband-luierrolle gereed vir versending.

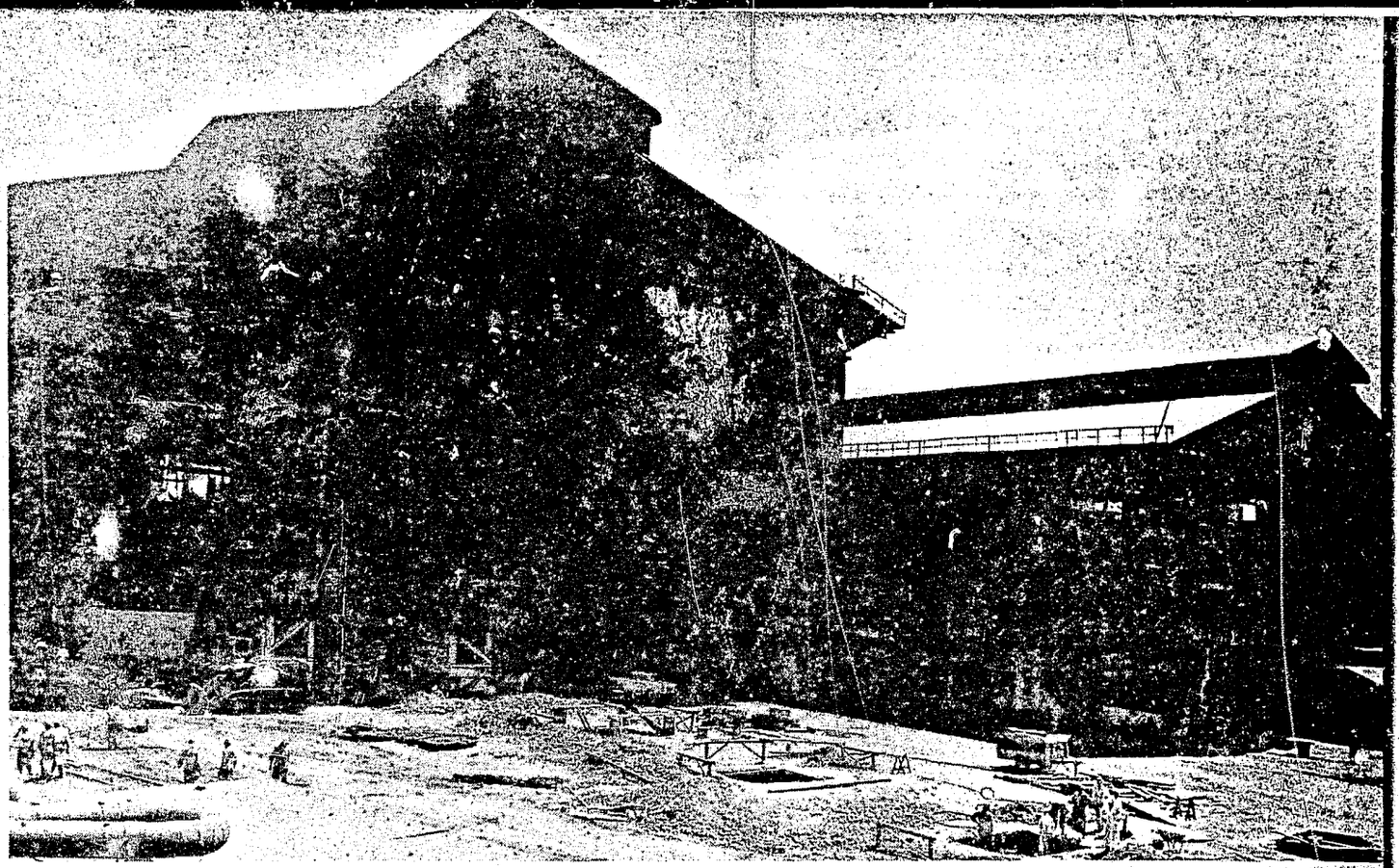
range of rotary dryers and coolers and various types of water screens. The materials handling equipment section includes bucket elevators, screw conveyors, Rotoscoops, chain conveyors, vibrating screens and feeders, oscillating conveyors, rotary plow feeders, trolley conveyors and foundry handling equipment.

Although the mining industry has been the main outlet for these products, growing industrialization allows deeper penetration into the chemical, steel, foundry, motor, sugar and various other industries as mechanized bulk handling is introduced.

Not only does Iscor supply the main material for the manufacturing operations of FMC, but it is also one of its more important customers. FMC supplies bulk materials handling equipment to all three works and various mining centres. Grootegeluk, the Corporation's blend coking coal mine being developed in the Waterberg coal-field in the north-western Transvaal, is at present the destination of a range of equipment from the FMC factory.

Power transmission equipment is another division of the range of products supplied by this company. This includes a wide range of spherical and cylindrical roller bearings in various types of housings, mounted ball bearings, bronze and babbitted bearings. Other power transmission products include a broad range of chain such as transmission roller chain, conveyor, elevator, shuttle-car and various general-line chains. Also part of this division's products is a range of speed variators. These are specialized gearboxes which can be adjusted to variable speeds. They have a wide range of applications in industry, for example production control systems in the textile, printing and paper industries.

As public concern over environmental pollution has grown, so the company has developed equipment to combat this hazard. FMCSA is aware of the fact that rapid industrialization in the Republic will create a growing demand for this equipment, and the company therefore anticipates that this will be a field for the expansion of its activities. It has already supplied plants for water purification. The parent company is well known for a recent development — the double alkali system for removing sulphur dioxide from industrial emissions. This is applicable to power plant where the use of a relatively high-sulphur coal requires that emissions be suitably controlled to prevent pollution.



Aanleg sal vloeistaal vinnig behandel

TERREINVOORBEREIDINGSWERK vir die nuwe vakuumontgassingsaanleg by Yskor se Pretoria-werke het begin. 'n Kontrak vir die aanleg is aangegaan met Infurnco (Edms) Bpk, van Boksburg, in samewerking met Vacmetal Gesellschaft Für Vakuum-Metallurgie MBH, van Wes-Duitsland, en Heurtey Metallurgie, van Parys, Frankryk.

Die aanleg sal gekoppel wees aan die rotoraanleg en sal in staat wees om 125 ton vloeistaal in minder as 'n uur te behandel. Dit sal die waterstof- en suurstofinhoud van vloeistaal verminder, en deur beheerde toevoeging van legeringsmateriaal — onder atmosferiese of vakuumtoestande — sal 'n hoë graad van noukeurigheid bereik word ten opsigte van vereiste ontleding en die suiwerheid van staal geproduseer.

Die projek sal na verwagting vroeg in 1981 voltooi wees.

SITE preparation work has begun for the new vacuum degassing plant at Iscor's Pretoria Works. A contract for the plant has been concluded with Infurnco (Pty) Ltd, of Boksburg, in collaboration with Vacmetal Gesellschaft Für Vakuum-Metallurgie MBH, of West Germany, and Heurtey Metallurgie, of Paris, France.

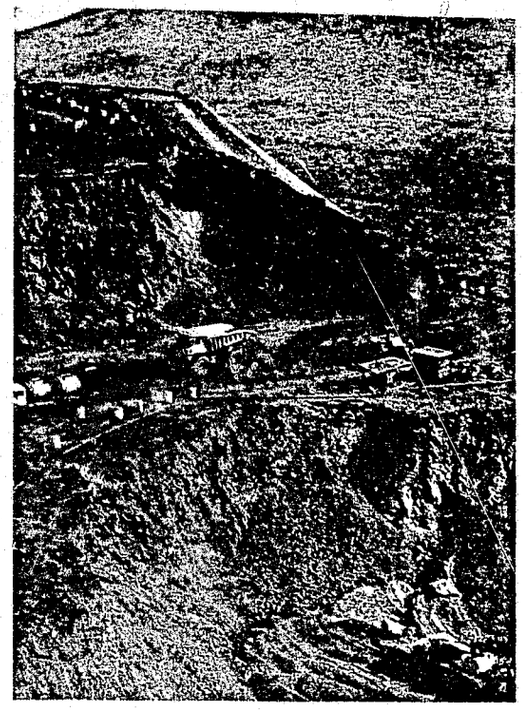
The plant will work in conjunction with the rotor plant and will be capable of treating 125 tons of liquid steel in less than an hour. It will reduce the hydrogen and oxygen contents of liquid steel, and by the controlled addition of alloying materials — under atmospheric or vacuum conditions — a high degree of accuracy will be achieved in respect of required analysis and the cleanliness of steel produced.

The project is expected to be completed early in 1981.

Slakformasie

Gedruk deur Perskor, Doornfontein, Johannesburg

SEPTEMBER 1970



Voorblad

Oopgroef-ontginning van ystererts in die Donkerpoort-berg by Thabazimbi.

Cover

Open-cast mining of iron ore in the Donkerpoort mountain at Thabazimbi.

YSKORNUUS
ISCOR NEWS

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DIE TYDSKRIF VAN DIE SUID-AFRIKAANSE YSTER EN STAAL INDUSTRIËLE KORPORASIE, BEPERK

THE JOURNAL OF THE SOUTH AFRICAN IRON AND STEEL INDUSTRIAL CORPORATION, LIMITED

Posbus 450, Pretoria, 0001 **Telefoon 41-4111**
P.O. Box 450, Pretoria, 0001 **Telephone 41-4111**

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Volume 44: Number 9

METINGS van die toestand van die atmosfeer met uiters doeltreffende toerusting om en in Yskor se drie staalwerke vind op 'n gereelde grondslag plaas. Hierdie metings word gedoen om die Korporasie in staat te stel om vir vergelykingsdoeleindes 'n duidelike beeld te vorm van huidige emissietoestande nadat besoedelingsbestryding toegepas is, te probeer bepaal wat Yskor se bydrae tot lugbesoedeling in die omgewing is, lugbesoedelingsbronne uit te ken met die oog op spesifisering van bestrydingstoerusting en werknemers se gesondheid te beskerm in nakoming van die Wet op Bedryfsiektes in Myne en Bedrywe. In die nastrewing van hierdie doelwitte vind noue skakeling tussen die Korporasie en die Wetenskaplike en Nywerheidnavorsingsraad (WNNR) plaas.

'n Reeks artikels, die eerste waarvan in hierdie uitgawe verskyn, behandel die metingsbedrywighede by die die Yskor-staalwerke.

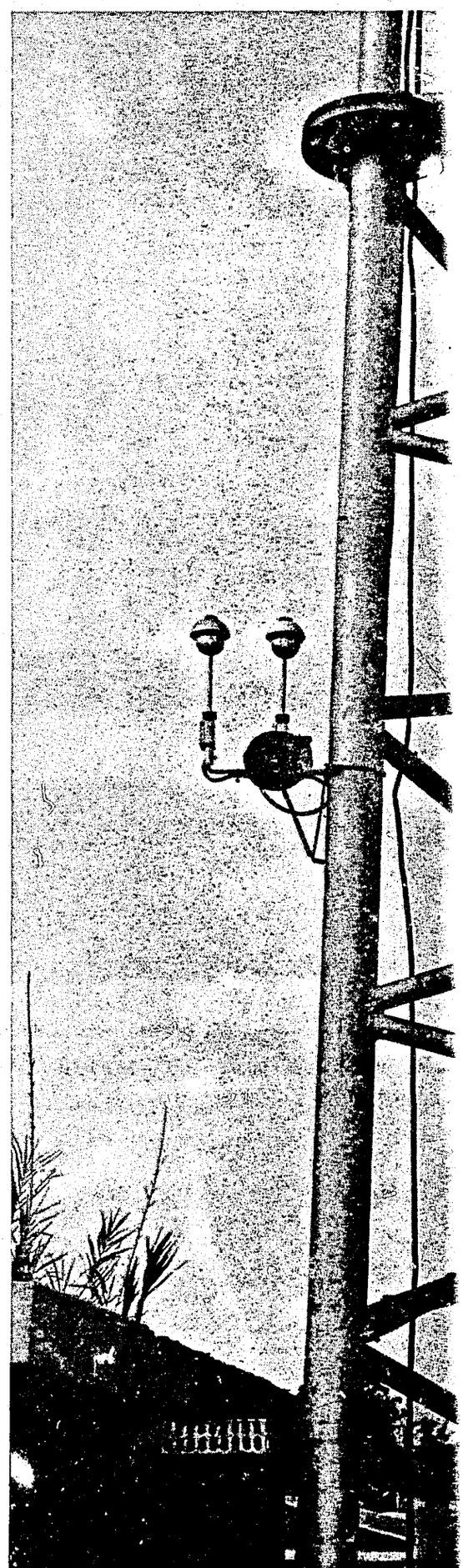
Staalwerk is op die hoogte

DIE Pretoria-werke is voortdurend op die hoogte van lugbesoedelingstoestande in en om sy gebied. Vir die bepaling van swaeldioksied en stof in die lug in die werke-omgewing, word die WNNR- en Philips-Coulo-metriese metodes toegepas. Verwerkings van data verkry met die Philips-apparate was aanvanklik baie tydrowend totdat, in samewerking met die werkeseksie Outomatisasiestelsels, 'n mikrorekenaar in gebruik geneem is. Dié rekenaar sommeer data elke drie minute, druk gemiddeldes met behulp van 'n letterdrukmasjien en maak ook uurlikse opsommings.

Die opnamepunte om die werke is by die Pretoriase Vakopleidingsentrum, Yskor se hondeskool, die Suid-Afrikaanse Polisie se hondeskool, die Pretoria-kragstasie, 'n wesgeleë hospitaal vir Swart mense en Laudium.

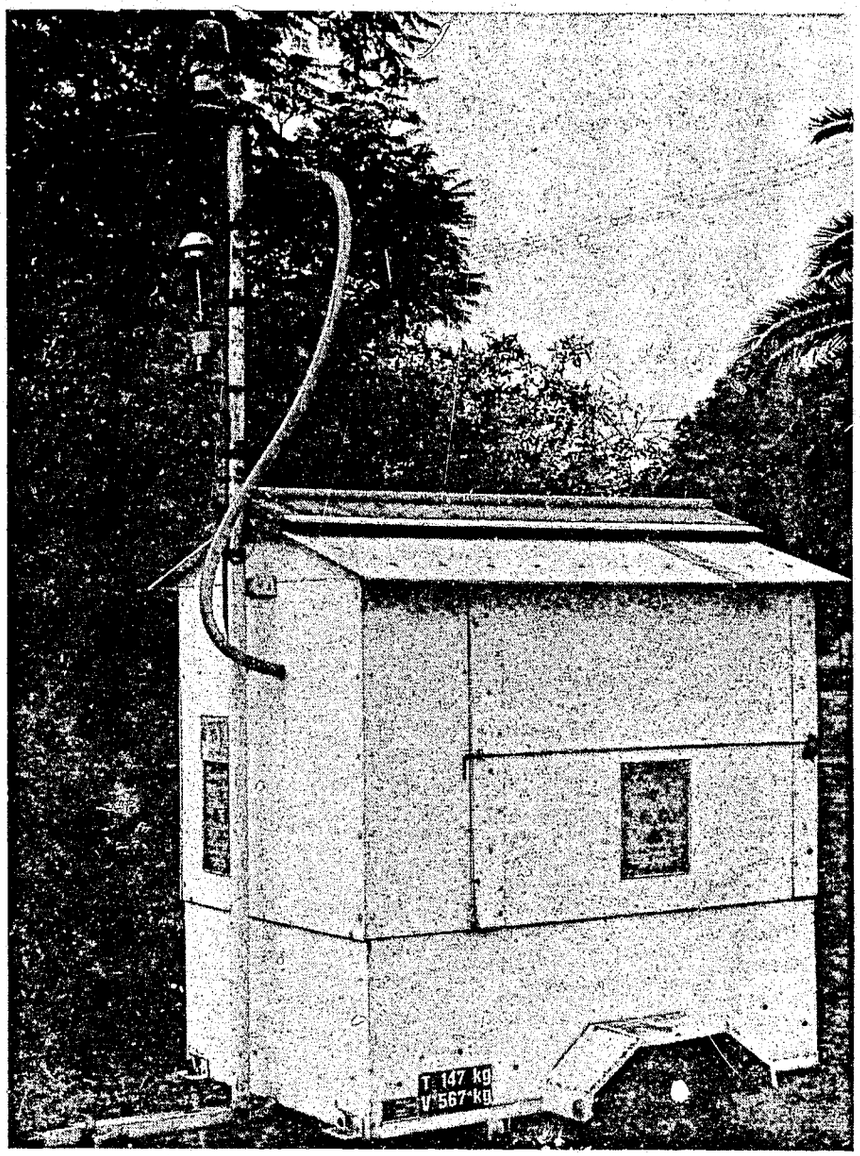
Op die aanname dat windrigtings by opnamepunte in die werkeomgewing dieselfde is, is waarnemings hiervan slegs by die Pretoriase Vakopleidingsentrum gedoen. Die windfrekwensie uit 'n bepaalde rigting per maand is vergelyk met die konsentrasie van swaeldioksied per maand vir 'n tydperk van 12 maande.

'n Regressie-ontleding is gedoen van uurlikse gegewens wat gedurende drie wintermaande in 1978 by die Pretoriase Vakopleidingsentrum gemeet is. Die swaeldioksied-



'n Temperatuurmeter aan 'n verligtingsmas langs die rugbyveld van die Pretoriase Vakopleidingsentrum.

A temperature meter on a lighting mast next to the rugby-field of the Pretoria Trades Training Centre.

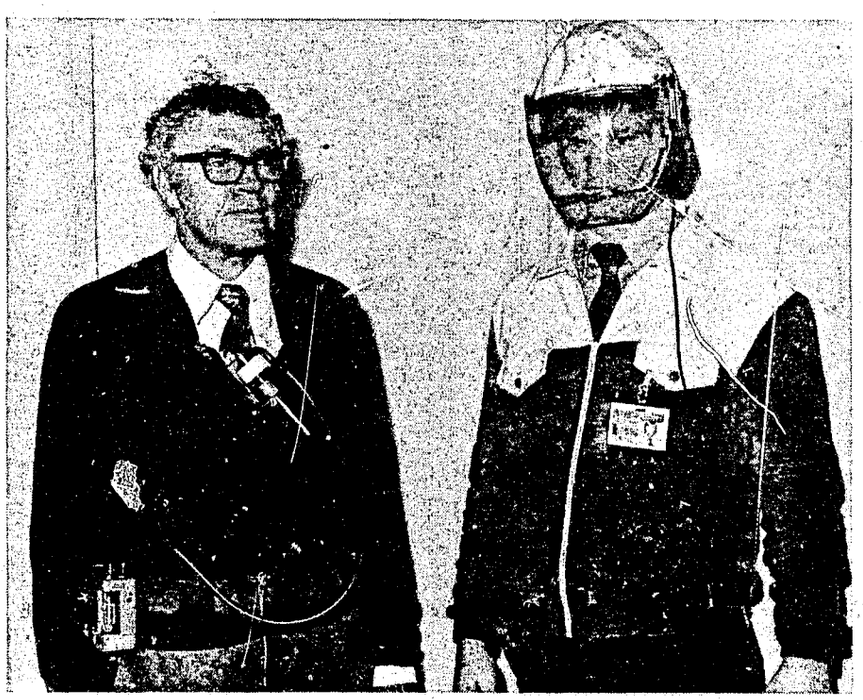


'n Mobiele eenheid vir die meet van temperature in en om die Pretoria-werke.

A mobile unit for measuring temperatures in and around the Pretoria Works.

konsentrasie is uitgedruk as 'n funksie van windrigting en -snelheid, inversiediepte, temperatuur en vogtigheid, en deur statistiese korrelasie is regressie-koëffisiënte tot 0,69 verkry. Met behulp van hierdie koëffisiënte kan die swaeldioksied-konsentrasie redelik reg voorspel word as metings van die beïnvloedende weerstoestande beskikbaar is.

Met die oog op spesifisering van beheertoerusting is toetse op die uitlaatgas van die suidelike koepeloond by die gietery in die werke uitgevoer. Die metings is in die skoorsteen 3,85 m bo die laaideur gedoen en volumevloei, temperatuur, afgas-analise, gasdigtheid, stofbelading en partikelgrootte-analise is bepaal. Hierdie toetse was die grondslag vir onlangse goedkeuring vir die installering van 'n venturi-gasskropstelsel by die koepeloond. Die stelsel sal nagenoeg 'n halfmiljoen rand kos en is bedoel om te voldoen aan die vereistes van Wet 45 van 1965 (die Wet op Voorkoming van Lugbesoedeling).



Mnr. J. J. Barnard (links), Tegnikus, Omgewingsbeheer en Bedryfshigiëne Pretoria-werke, met 'n standaard-MSA-persoonlike dosismeter wat gebruik is om menslike blootstelling aan lugbesoedelende stowwe in die werke te meet. Langs hom verskyn 'n kollega, mnr. H. J. de Klerk, met 'n „Airstream"-antistofhelm.

Mr. J. J. Barnard (left), Technician, Environmental Control and Industrial Hygiene, Pretoria Works, with a standard MSA personal dose meter which has been used to measure human exposure to air polluting substances in the works. Appearing next to him with an "Airstream" anti-dust helmet is a colleague, Mr. H. J. de Klerk.

'n Standaard-MSA-persoonlike dosismeter is gebruik om menslike blootstelling aan lugbesoedelende stowwe binne die werke te meet. Die resultate van die blootstellingstoetse is vervolgens saamgevat in 'n lys van risikoposte wat aandui watter persone blootgestel word aan konsentrasies wat beheer word deur regulasie 10.1.2 van die Wet op Myne en Bedrywe. Hierdie lys was die grondslag van 'n voorlegging aan die Adjunk-Staatsmyningenieur wat toestemming gegee het vir die beskerming van persone soos deur die werke geïdentifiseer — in plaas van geïdentifiseer deur die Staatsmyningenieur.

Die „Airstream"-antistofhelm is aanbeveel vir beskerming teen oormatige blootstelling. Hierdie helms word reeds uitgereik aan blootgestelde persone kragtens regulasie 10.1.2

In samewerking met die seksie Bedryfshigiëne is begin om die totale massa stof in die werke te bepaal, aangesien dit blykbaar in die toekoms 'n oorweging by risikoblootstelling kragtens Wet 78 van 1973 (die Wet op Bedryfsiektes in Myne en Bedrywe) sal word. 'n Finale besluit oor die metode wat vir die bepaling van totale stof gebruik gaan word, is nog nie geneem nie.

'n Skedule van swaeldioksiedemissies uit alle werkebronne op 'n uurlikse grondslag is vir vyf maande opgestel. Die skedule is aan die WNNR oorhandig vir gebruik in die Pretoria-modelprojek, 'n poging onder leiding van die WNNR — bygestaan deur die Universiteit van die Witwatersrand, die Stadsraad van Pretoria en die Korporasie — om 'n wiskundige model te bou ten opsigte van die verspreiding van lugbesoedeling in stedelike omgewings. In hierdie projek word besoedelingsbronne opgespoor en weerkundige data gemeet in 'n poging om vas te stel hoe die een die ander en die verspreiding van lugbesoedeling beïnvloed.

Die werke het alle tydelike en permanente permitte, soos voorgeskryf deur die Wet op Voorkoming van Lugbesoedeling, aangevra. Albei hierdie permitte word deur die Hoofbeampte vir Bestryding van Lugbesoedeling van die Departement van Gesondheid uitgereik. Die tydelike sertifikaat verleen toestemming om 'n nuwe aanleg te bou en te bedryf, met die voorbehoud dat die aanleg voldoen aan die lugbesoedelingsvereistes in die permit vervat. Indien hierdie bewys vervolgens gelewer word, volg die uitreiking van 'n permanente sertifikaat waarin verklaar word dat die aanleg aan die neergelegde lugbesoedelingsvereistes voldoen.

BRIEFLY

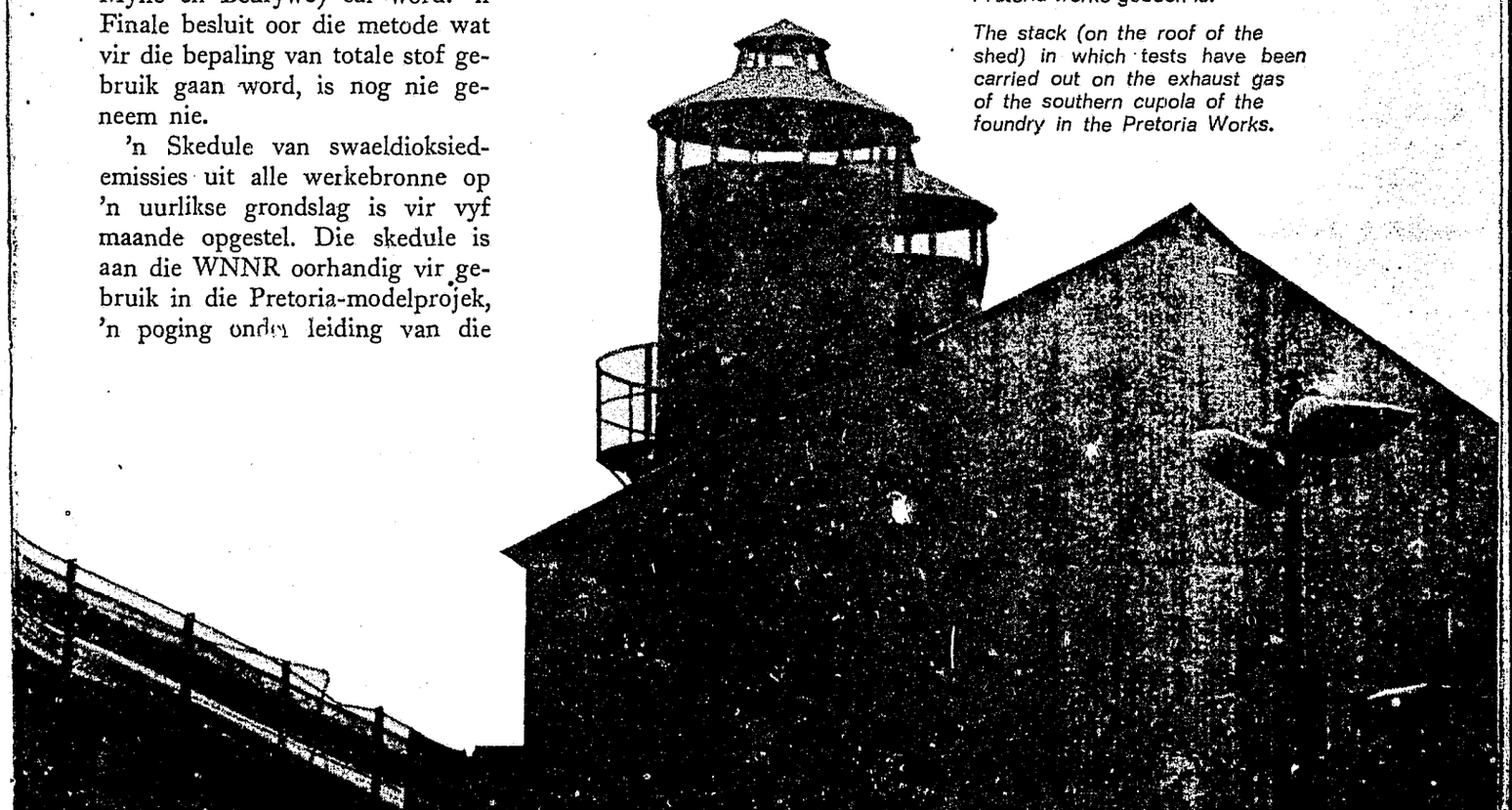
MEASUREMENTS of atmospheric conditions with extremely efficient equipment are conducted on a regular basis around and in Iscor's three steelworks. A series of articles, the first of which appears in this issue, deals with the measurement activities at the three works.

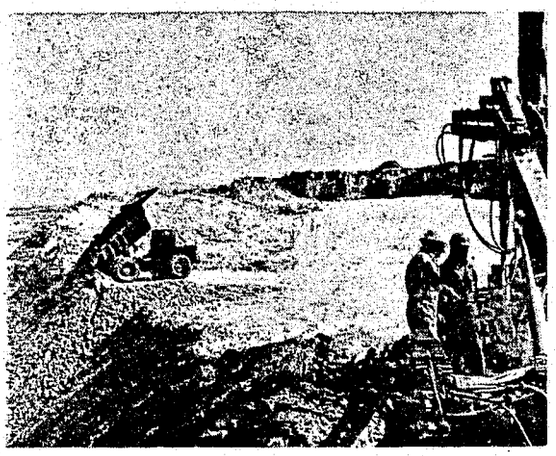
The Pretoria Works is continuously posted on the prevailing conditions by means of six monitoring points around it, whilst various measurements are being carried out in the works area.

The works has applied to the Department of Health for all temporary and permanent permits, as prescribed by the Atmospheric Pollution Prevention Act, 1965.

Die skoorsteen (op die dak van die loods) waarin toetse op die uitlaatgas van die suidelike koepeloond van die gietery in die Pretoria-werke gedoen is.

The stack (on the roof of the shed) in which tests have been carried out on the exhaust gas of the southern cupola of the foundry in the Pretoria Works.





Quartzite being off-loaded at the ore tip by a 35-ton rear-dump truck.

Kwartsiet word deur 'n agterstortwa van 35 ton by die ertsstort afgelaai.

DONKERHOEK

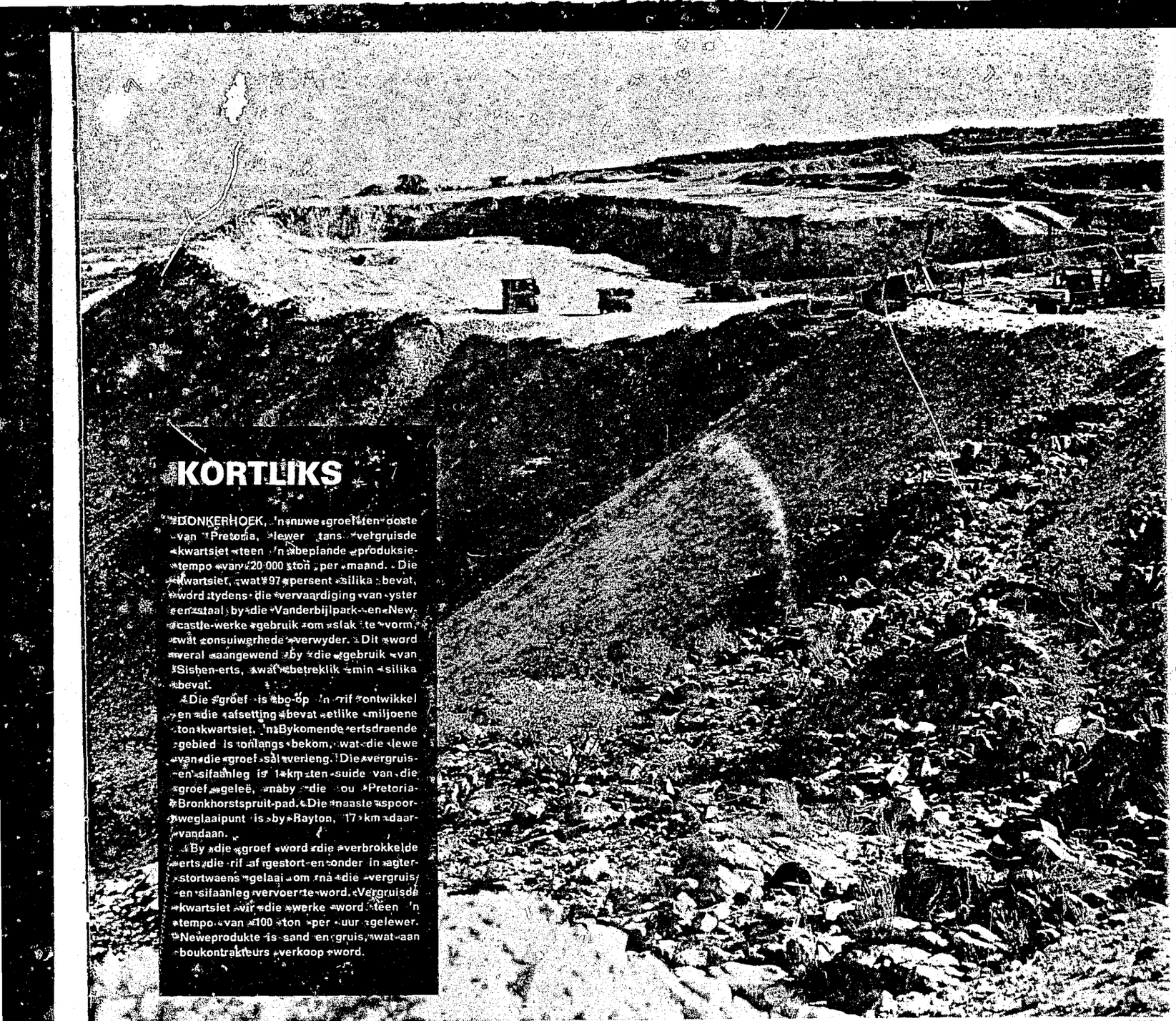
...new silica source

DONKERHOEK, a new quarry east of Pretoria, is producing crushed quartzite at a planned rate of 20,000 tons a month. The quartzite, consisting of 97 per cent silica, and with a low potassium content, is used at the Vanderbijlpark and Newcastle Works to aid the iron making process when iron ore from the Corporation's mine at Sishen, which has a comparatively low silica content, is used in the blast furnaces. The addition of silica results in better formation of slag, which is a medium for the separation and removal of impurities in the iron and steel making processes.

The quarry has been developed on the crown of a ridge running roughly east-west. The crushing and screening plant is situated about 1 km to the south, close to the old Pretoria-Bronkhorstspruit road. The nearest rail loading point for the dispatch of the quartzite to the works is at Rayton, about 17 km distant.

The quartzite is overlain by decomposed material in the form of sandstone. In the provisional pit layout and at a stripping ratio of 0,3 tons of waste to one of quartzite, the estimated reserves are in the region of 3 million tons. At a more realistic final stripping ratio of one to one, the reserves will increase to approximately 6 million tons. An adjoining piece of land with similar potential has been acquired.

In the sandstone there is a considerable amount of hard material, and this and the extremely abra-



KORTLIKS

DONKERHOEK, 'n nuwe groef ten ooste van Pretoria, lewer tans vergruisde kwartsiet teen 'n beplande produksietempo van 20 000 ton per maand. Die kwartsiet, wat 97 persent silika bevat, word tydens die vervaardiging van yster en staal by die Vanderbijlpark- en Newcastle-werke gebruik om slak te vorm, wat consuiwerhede verwyder. Dit word veral aangewend by die gebruik van Sishen-erts, wat betreklik min silika bevat.

Die groef is bo-op 'n rif ontwikkel en die afsetting bevat etlike miljoene ton kwartsiet. 'n Bykomende ertsdraende gebied is onlangs bekom, wat die lewe van die groef sal verleng. Die vergruis- en sifaanleg is 1 km ten suide van die groef geleë, naby die ou Pretoria-Bronkhorstspruit-pad. Die naaste spoorweglaaipunt is by Rayton, 17 km daarvandaan.

By die groef word die verbrokkelde erts die rif afgestort en onder in agterstortwaens gelaai om na die vergruis- en sifaanleg vervoer te word. Vergruisde kwartsiet vir die werke word teen 'n tempo van 100 ton per uur gelewer. Neweprodukte is sand en gruis, wat aan boukontrakteurs verkoop word.

The Donkerhoek quartzite quarry on top of a ridge east of Pretoria.

Die Donkerhoek-kwartsietgroef bo-op 'n rif ten ooste van Pretoria.

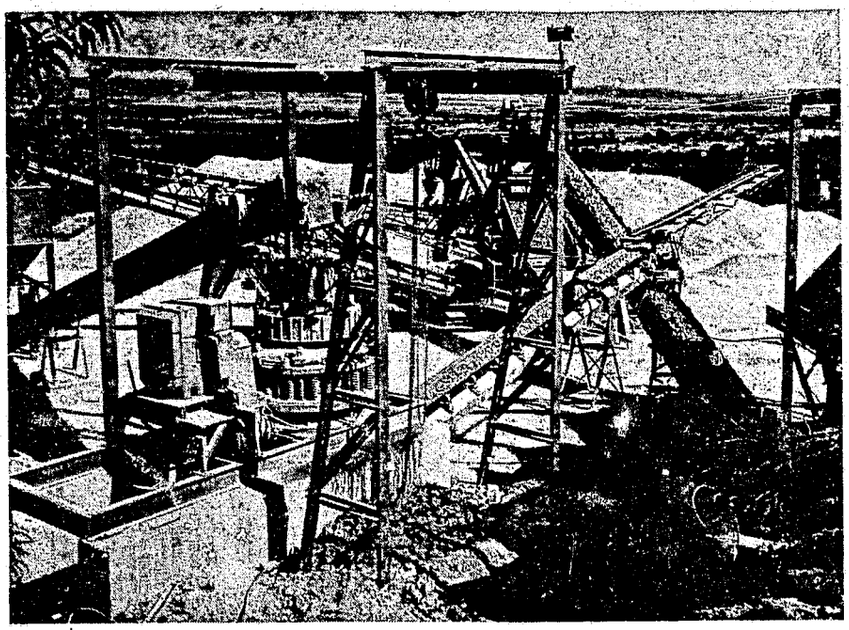
Below the ore tip the quartzite is loaded into a rear-dump truck. In the background the crushing and screening plant is to be seen.

Onder by die ertsstort word die kwartsiet in 'n agterstortwa gelaai. Op die agtergrond is die vergruis- en sifaanleg te sien.

sive quartzite make drilling difficult and reduce drill bit life to 30 m per bit in places. The average is in the region of 80 m per bit. The occurrence of hard patches influences production, and the economics of difficult drilling and high bit consumption make a normal operation such as pit floor levelling counter-productive.

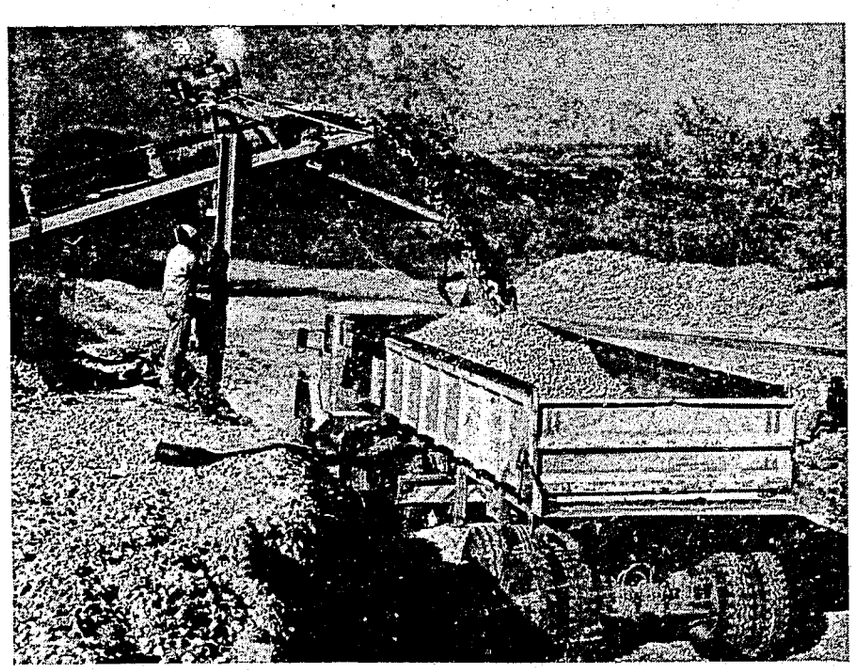
Mining operations have been planned to progress at successive 8-9 m levels. Drills are of the track type and 89 mm blasting holes are drilled to a depth varying between 8 and 12 m. The blasted material is loaded selectively by 5 m^3 capacity front-end loaders into 35-ton rear-dump trucks. Broken material which contains less than a determined percentage of quartzite is diverted to the waste tip. At R5 per cubic metre the cost of handling the run-of-mine material — mining, transporting to the plant, crushing, screening and loading it — has an important bearing on selective mining and loading.

The quartzite is transported to a tip at a point approximately halfway along the quarry and about 90 m above a loading point at the



The crushing and screening plant at Donkerhoek. On the right is the conveyor from the primary crusher to the primary screen and on the left are the bin and conveyor feeding the secondary crusher. Behind is the quartzite stockpile.

Die vergruis- en sifaanleg by Donkerhoek. Regs is die vervoerband vanaf die primêre vergruiser na die primêre sif en links die bak en vervoerband wat die sekondêre vergruiser voer. Agter is die kwartsietstapel.



Crushed quartzite, destined for Iscor's works, is loaded into a truck.
Vergruisde kwartsiet, bestem vir Yskor se werke, word in 'n vragwa gelaai.

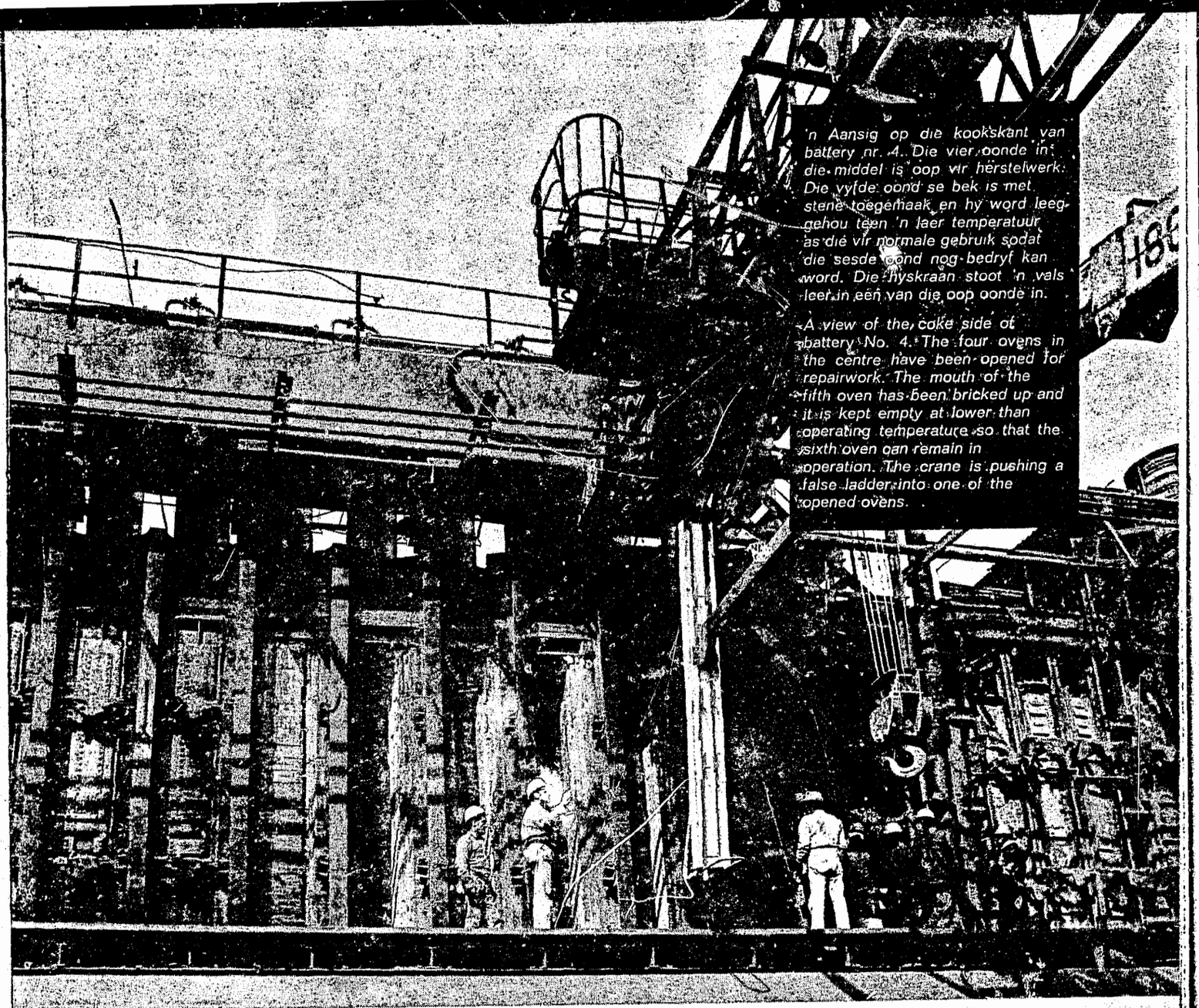
base of the ridge. At this point front-end loaders load the quartzite into reardump trucks which convey it over a distance of 1 km to the crushing and screening plant.

Modifications to the original design of this plant have recently been carried out and have almost doubled production capacity. Throughput is now between 170 and 200 tons an hour, resulting in the production of 100 tons of quartzite an hour. The quartzite stockpile capacity's is 12 000 tons, which is sufficient to supply the works for three weeks in the event of a major breakdown at the quarry plant. The quartzite is transported by a contractor to the rail loading point at Rayton.

The material from the quarry is tipped into the primary crusher — a 635 x 914 mm jaw crusher — which reduces the quartzite to -125 mm. From the crusher the material is conveyed to the primary screening section. A recent modification to this section has been the addition of a divigator with a recirculating circuit incorporating the secondary crusher. The divigator is a supplementary screening facility which diverts the largest of the oversize material from the screens, thus preventing overloading. It consists of floating rods spaced to remove +60 mm material, which is fed to the bin of the secondary crusher. Some 30 per cent and more of the flow to the primary screens is diverted in this way. The +40 mm material from the 1,83 x 4,88 m triple-deck primary screen also moves to the secondary 1,22 m diameter gyratory crusher which has a capacity of 200 tons an hour recirculating load at 30 mm size.

The feed to the secondary crusher is crushed to 40 mm maximum and rejoins the flow to the primary screening section which delivers -40 mm material. Before stockpiling, this material is passed over a 1,22 x 3,57 m double-deck screen to reduce -10 mm material to a minimum — for the works requirements it should not exceed about 7 per cent.

The by-products, sand and chips, are stockpiled separately. The plant handles about 1 000 tons a day, of which about 55 per cent is dispatched to the works. The Newcastle Works also makes use of a limited quantity of fine material at the sinter plant. The sand and chips are being sold to building contractors, and it is anticipated that this market will grow.



'n Aansig op die kookskant van battery nr. 4. Die vier oonde in die middel is oop vir herstelwerk. Die vyfde oond se bek is met stene toegemaak en hy word leeggehou teen 'n laer temperatuur as dié vir normale gebruik sodat die sesde oond nog bedryf kan word. Die hyskraan stoot 'n vals leer in een van die oop oonde in.

A view of the coke side of battery No. 4. The four ovens in the centre have been opened for repairwork. The mouth of the fifth oven has been bricked up and it is kept empty at lower than operating temperature so that the sixth oven can remain in operation. The crane is pushing a false ladder into one of the opened ovens.

Baanbrekerswerk bespaar miljoene

VOLGENS beplanning sou twee van die vier kooksoondbatterye by die Korporasie se Pretoria-werke gedurende 1979 en 1980 vervang moes word teen 'n totale koste van ongeveer R30-miljoen. Grootskaalse baanbrekersherstelwerk wat tans deur Yskor-personeel self aan battery nr. 4 gedoen word — waarna battery nr. 3 dadelik aan die beurt kom — gaan die vervanging van dié twee batterye met minstens 10 jaar uitstel en dit onnodig maak dat 'n groot kapitaalbedrag in die huidige ongunstige ekonomiese klimaat bestee word.

Die jongste ramings van 'n oorsese kontrakteur vir die herstel van kooksoondbatterye stel die koste daarvan op sowat een vyfde van die prys van 'n nuwe battery. Deur die werk self te doen, verminder die Korporasie se personeel egter die herstelkoste aan batterye nrs. 3 en 4 van ongeveer R6-miljoen tot R3,1-miljoen — die bedrag wat deur die Yskor-raad vir die werk bewillig is.

Daar is tans allerlei ontwikkelings in die wêreld ten opsigte van

die produksie van 'n brandstof en reduseermiddel vir hoogoonde. Produksie van kooksbrikette of vormkooks van laegraadse steenkool wat volop in Suid-Afrika is, is twee moontlikhede. Deur die vervanging van die kooksoondbatterye uit te stel, kry die Korporasie die kans om te sien hoe hierdie tegnologieë ontwikkel en kan hy besluit of daar in die toekoms byvoorbeeld 'n vormkooksaanleg in plaas van konvensionele kooksoondbatterye opgerig moet word. Die moontlikheid is ook nie uitgesluit dat die batterye weer eens na 10 jaar herbou kan word nie.

Die selfdoen van die herstelwerk hou ook die voordeel in dat die Korporasie besig is om kundigheid ten opsigte van hierdie herbouwerk te bekom en homself dus te voeg by 'n klein groepie ondernemings wat in staat is om hierdie werk te doen. Dié werk is nog nooit voorheen in Suid-Afrika verrig nie, en sover vasgestel kon word, is daar in die Westerse wêreld nie meer as vyf ondernemings wat daartoe in staat is nie.

In die ontwikkeling van kundigheid moes Yskor verskeie tegniese probleme oorkom.

● Isoleermateriaal moes gevind word om messelaars en nuwe silikastene te beskerm teen die hitte uit die sentrale gedeelte van die oond wat teen 1 000°C gehou word.

● Spesiaal gevormde silikastene, wat nodig is om die drukkragte in 'n oond te weerstaan, was nie beskikbaar nie. Gevolglik is gedeeltes van die mure versigtig afgebreek en noukeurige werkstekeninge gemaak.

● Toelating moes gedoen word vir die uitsetting van die nuwe silikastene tydens die verhittingsproses en 'n samedrukbare sement is ontwikkel. Hierdie sement word nou ook deur Amerikaanse herbouers van kooksoondbatterye gebruik.

● Deurraamplate wat erg verweer was, moes vervang word. Herontwerpte plate is by die Pretoriawerke se gietery gegiet en suksesvol in gebruik geneem.

Silikastene word in 'n oond ingebou. Bokant die messelaar se kop is die staalbalke wat die dak ondersteun en ineenstorting verhoed.

Silica bricks being built into an oven. Above the bricklayer's head are the steel beams supporting the roof against collapse.

'n Oond van bo gesien, met 'n gat in die muur. Op die voorgrond verskyn die raam en op die agtergrond die keermuur. Die muur duskant die keermuur sal verwyder word vir herboudoeleindes.

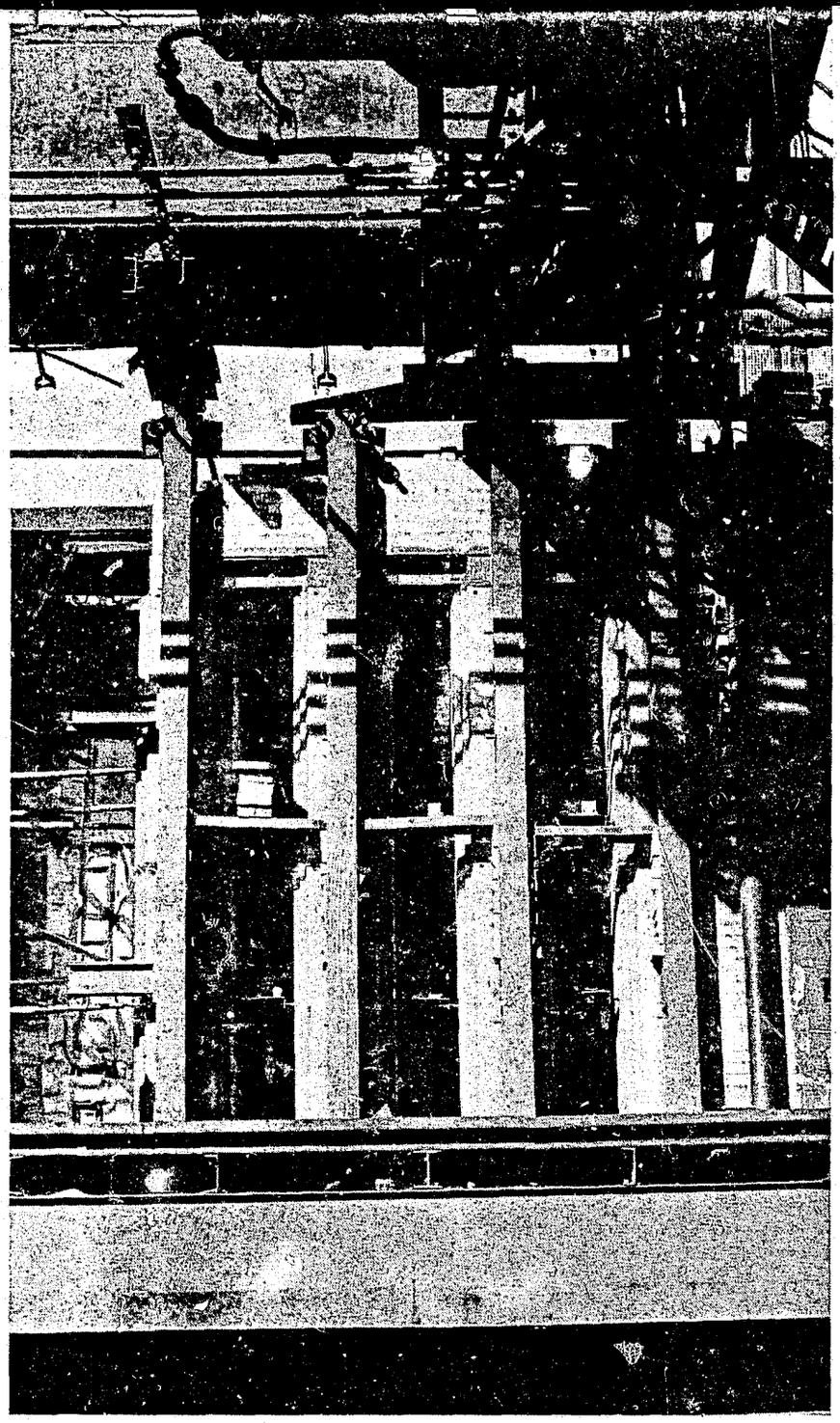
An oven seen from above, with a hole in the wall. In the foreground is the frame and in the background the breast wall. The wall on this side of the breast will be removed for rebuilding purposes.

Byna voltooide herbouwerk aan die eerste vier oonde van battery nr. 4.

Almost completed rebuilding work on the first four ovens of battery No. 4.

● Al hierdie werk is so beplan dat vertragings in produksieskedules tot die minimum beperk is.

Die oorkoming van hierdie probleme was die grondslag vir die geleidelike ontwikkeling van 'n opgeleide mannekragkomplement op die gebied van kooksoondherstelwerk. Weens beperkte kennis omtrent hierdie soort werk, is heel aan die begin reeds besluit op 'n spanpoging waarin gebruik gemaak sou word van elke werknemer se vaardigheid, vindingrykheid en kennis. Die oorspronklike span het onder leiding van die Superintendent, Kooksoonde, gestaan. Die spanlede het uit die geledere van kooksoondproduksie, -instandhouding en vuurvaste materiaalinstandhouding gekom. Werk is met behulp van sogenaamde „dinkskrumsessies" vooruit beplan en in elemente verdeel. Probleme is pragmaties opgelos deur verdeelgebruik te maak van die menings van spanlede op die vloer, aangesien hierdie werknemers oor 'n magdom ervaring beskik. Kort vergaderings is elke oggend gehou



Huidige herstelwerk aan die stootkant van battery nr. 4. Uitbreekwerk is tot by die batterytop gedoen. Links verskyn die rame wat vervang gaan word. Let op die stutte wat die steenwerk in posisie hou. Op die agtergrond is die muur waaraan die nuwe steenwerk geheg gaan word.

Current repair work on the pusher side of battery No. 4. Break-out work has been done up to the battery top. On the left are the frames which are to be replaced. Note the supports keeping the brickwork in position. In the background is the wall to which the new brickwork will be attached.

vir die bespreking van vordering, probleme van die vorige dag en beplanning vir die huidige dag.

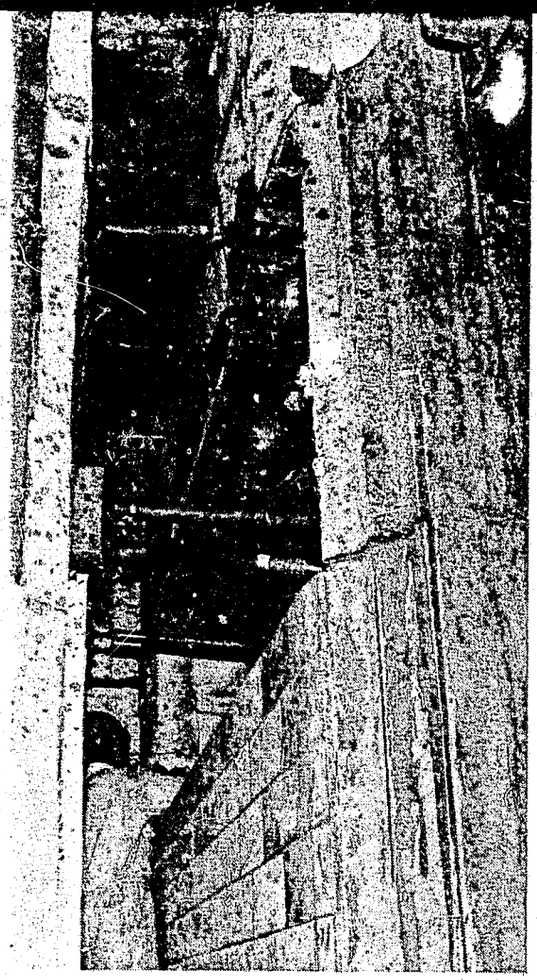
Die resultaat was die vorming van 'n hegte span wat die kern was vir die groter span wat die omvangryke herstelwerk aan battery nr. 4 aangepak het.

Yskor se kundigheid en die mannekragkomplement se vaardigheid wat die vervanging van batterye nrs. 3 en 4 vir die huidige onnodig gaan maak, is reeds bewys deur noodsaaklike herstelwerk wat die Korporasie sowat R1,5-miljoen — in vergelyking met die pryse van buite-kontrakteurs — oor die afgelope drie jaar bespaar het.

Battery nr. 4 se deurraamplate en stutbalke, onderskeidelik deur die werkeseksies Gietery en Presco gemaak, is in 1975 vervang. Hiertydens is al die steenwerk wat met die verwydering van die ou plate uitgeval het, net so teruggebou, aangesien geen nuwe stene beskikbaar was nie. Afmetings is geneem en vervolgens is tekeninge van hierdie stene gemaak.

In daardie stadium het die Superintendent, Kooksoonde, tydens 'n besoek aan die VSA gesien hoe herbouwerk aan 'n oondmuur gedoen word. Hy het ook gegewens bekom oor bepaalde tegnieke. Bevestiging is verkry dat hierdie soort herstelwerk batterylewens aansienlik verleng. Sy bevindings was voldoende om die werkspan te oortuig dat hulle op die regte pad was.

Gedurende 1976 is battery nr. 6 se deurraamplate en stutbalke aan albei kante vervang. Op die tydstip



'n Oond wat halfpad met silikastene herbou is. Let op die dwarsstutte tussen 'n muur regs (nie sigbaar op die foto nie) en nog 'n muur (links) wat sorg dat die silikastene normaalweg kan afkoel.

An oven which has been rebuilt half-way with silica bricks. Note the cross supports between a wall on the right (not visible in the photo) and another wall (left) which ensure that the silica bricks can cool normally.

was die kookskant van een van nr. 4 se oonde ook reeds herbou tot 'n diepte van 1,3 m tussen die oondvloer en -dak. Nuwe stene was nog nie beskikbaar nie, maar oortollige silikastene is van die Vanderbijlpark-werke bekom en in die Pretoria-werke tot die regte groottes en vorms gesaag.

In 1977 is nuwe silikastene, waarvoor tekeninge by nr. 4 gemaak is, verkry en is voortgegaan met herstelwerk aan oondmure wat baie verweer was. In een geval is 'n oondmuur tussen die vloer en die top van die battery uitgebreek tot 'n diepte van 3 m die oond in. Hier is stene blootgelê waarvoor daar nog nie tekeninge was nie. Met die tekeninge wat toe gemaak is, was Yskor in besit van 'n volledige stel tekeninge vir al die verskillende vorms en groottes stene benodig. Daar is ook uiteindelik in geslaag om die oorspronklike tekeninge van die oprigter van die Pretoria-werke se kooksoonde te koop. 'n Vergelyking tussen hierdie en die selfgemaakte tekeninge het getoon dat laasgenoemdes verbasend noukeurig was. Met die herbou van voornoemde mure is weer eens van oortollige stene gebruik gemaak en is hulle tot die vereiste vorms en groottes gesaag.

Aan die einde van 1977 is van die oonde van battery nr. 3 van die vloer tot die dak 2 m diep die oond in herbou.

Vir die vervanging van die oondvloere was stene nie beskikbaar nie en is hulle gesaag uit groot blokke van die vereiste kwaliteit. Hiertydens is 'n metode ontwikkel om ou oondvloere wat vervang moet word, in 'n kwart van die normale tyd uit te haal.

Van die oonde was tot 3 m na binne beskadig. Sekere vorms van silikastene was nie dadelik bekombaar nie en daar is besluit om 60 persent van aluminastene van goeie gehalte gebruik te maak. Hulle was vryelik beskikbaar in groot blokke en dié is tot stene met tong en groef van die vereiste vorms en groottes gesaag. Dit het later geblyk dat hierdie stene doeltreffend was tot 1 m diep die oond in. Waar daar met hulle dieper gebou was, het daar na 'n tydsverloop verwringing voorgekom en moes hulle weer vervang word.

Die herbouwerk wat in 1975 gedoen is, is nog in 'n puik toestand. Al die noodherstelwerk het tot gevolg gehad dat die Pretoria-werke se oonde nog almal in gebruik is. Indien normale bedryfspraktyk gevolg was — 'n battery kooksoonde word in gebruik geneem en bly deurlopend in bedryf totdat dit na sy verwagte lewensduur van 25 tot 30 jaar finaal afgesluit word — sou ongeveer 30 oonde reeds finaal afgesluit gewees het.

Die ondervinding het egter daarop gedui dat praktiese werksomstandighede die herbouwerk, soos in die Pretoria-werke gedoen, nie vir die langtermyn geskik maak nie. Aangesien daar reeds in hierdie stadium besluit was om battery nr. 3 volledig te herhou, is 'n groep van drie Yskoriane op 'n feitesending na die buiteland gestuur. Bykomende kundigheid is verkry, en finale bevestiging is ook gevind dat hierdie soort herstelwerk batterylewensduur met 10 jaar of meer verleng.

Pas voordat met die grootskaalse herstelwerk aan battery nr. 3 begin is, het nr. 4 ernstige tekens van ineenstorting getoon en is daar besluit om hierdie battery eerste te herbou deur 'n span wat saamgestel is uit personeel van Kooksoondproduksie, Vuurvaste Materiaal-instandhouding en Werke-ingenieurswese.

Soortgelyke herstelwerk word tans in Wes-Duitsland gedoen. 'n Yskoriaan was daarheen op besoek en het gevind dat die herbouwerk by die Pretoria-werke in sommige opsigte meer omvangryk is: in Wes-Duitsland word daar nie onder vloervlak afgebreek nie.

BRIEFLY

ACCORDING to planning, two coke oven batteries at the Corporation's Pretoria Works were to have been replaced in 1979 and 1980 at a total cost of about R30 million. However, large-scale repairs to battery No. 4 by Iscor's own personnel are now in progress, upon completion of which similar work will be done on battery No. 3. This project will defer replacement of the two batteries by at least 10 years and will obviate a major capital expenditure in the present inflationary climate.

By carrying out the work itself, the Corporation has reduced the repair cost from R6 million — the approximate amount an outside contractor would have charged — to R3,1 million, the amount voted by the Iscor Board.

This do-it-yourself expedient means that the Corporation is developing its own know-how in this type of repair work, as well as a trained manpower complement — both based on sophisticated repair work done to coke oven batteries in the past.

Buitengewone stoel

'N BUITENGEWONE stoel is onlangs in die meganiese werkwinkel van die seksie Instrumentasie by Yskor se Vanderbijlparkwerke vervaardig. Dit is 'n terapeutiese stoel wat op versoek van Mediese Dienste gebou is vir die behandeling van werknemers wat beenbeserings opgedoen het.

Hierdie soort stoel, wat aan elektroniese apparaat gekoppel word, is nie vryelik in die handel verkrygbaar nie — daar is maar enkeles in gebruik in die Republiek — en voordat met die vervaardiging begin is, is een van die H. F. Verwoerd-hospitaal in Pretoria se ortopediese afdeling geleen. Foto's is daarvan geneem en planne is opgestel.

Ses werknemers van Instrumentasie het altesaam sowat 190 manure aan die vervaardiging van die stoel en elektroniese apparaat gewerk. Hulle is mnre. J. A. Nieuwoudt, J. A. Opperman, S. J. Lombard en D. P. Grobbelaar (meganiese werk), en mnre. H. R. Human en [illegible]eukes (elektroniese werk).

Die terapeutiese stoel word by die Mediese Stasie gebruik om mense wat in hul werk beenbeserings opgedoen het, te motiveer om oefeninge te doen. Die gemaklike, uiters verstelbare stoel, wat die pasiënt in die regte posisie laat sit vir die uitvoering van oefeninge, word gekoppel aan 'n elektroniese beheerkassie wat deur spierspanning aangeskakel word en dan die getal kere wat 'n oefening uitgevoer word, aandui.

Aan die beheerkassie kan werk- of speelapparaat, of 'n bandspeler, gekoppel word sodat 'n pasiënt byvoorbeeld soldeerwerk kan doen, 'n elektroniese speletjie kan speel of na musiek kan luister terwyl hy oefeninge met sy been doen. Sodra oefening gestaak word, word die elektriese stroom afgeskakel.

Die terapeutiese stoel is beslis 'n besonder nuttige „speelding" wat letterlik 'n baie „gesonde" doel dien.

BRIEFLY

AN EXTRAORDINARY chair was recently built by employees of the Instrumentation section at Iscor's Vanderbijlpark Works. It is a therapeutic chair which is used at the Medical Station for the treatment of leg injuries.

The chair, which is connected to electronic apparatus, actually motivates a patient to carry out leg exercises while he performs a manual task, plays a game or listens to music. The therapeutic chair is not commercially available and there are only a few in use in the Republic.

Die terapeutiese stoel en elektroniese apparaat wat deur Yskoriane by die Vanderbijlparkwerke vervaardig is. Mnr. D. P. Grobbelaar, wat die stoel help bou het, sit daarop, en langs hom staan mev. P. de Beer, 'n arbeidsterapeut.

The therapeutic chair and electronic apparatus manufactured by Iscorians at the Vanderbijlpark Works. Sitting on the chair is Mr. D. P. Grobbelaar, who helped build it, and standing next to him is Mrs. P. de Beer, an occupational therapist.

Safety effort bears fruit

"THE EMPLOYEE is industry's most valuable asset, and human suffering resulting from accidents cannot be calculated in terms of monetary compensation." These words form part of the Chairman's foreword to Iscor's General Safety Rules and illustrate the attitude of management to the subject of safety.

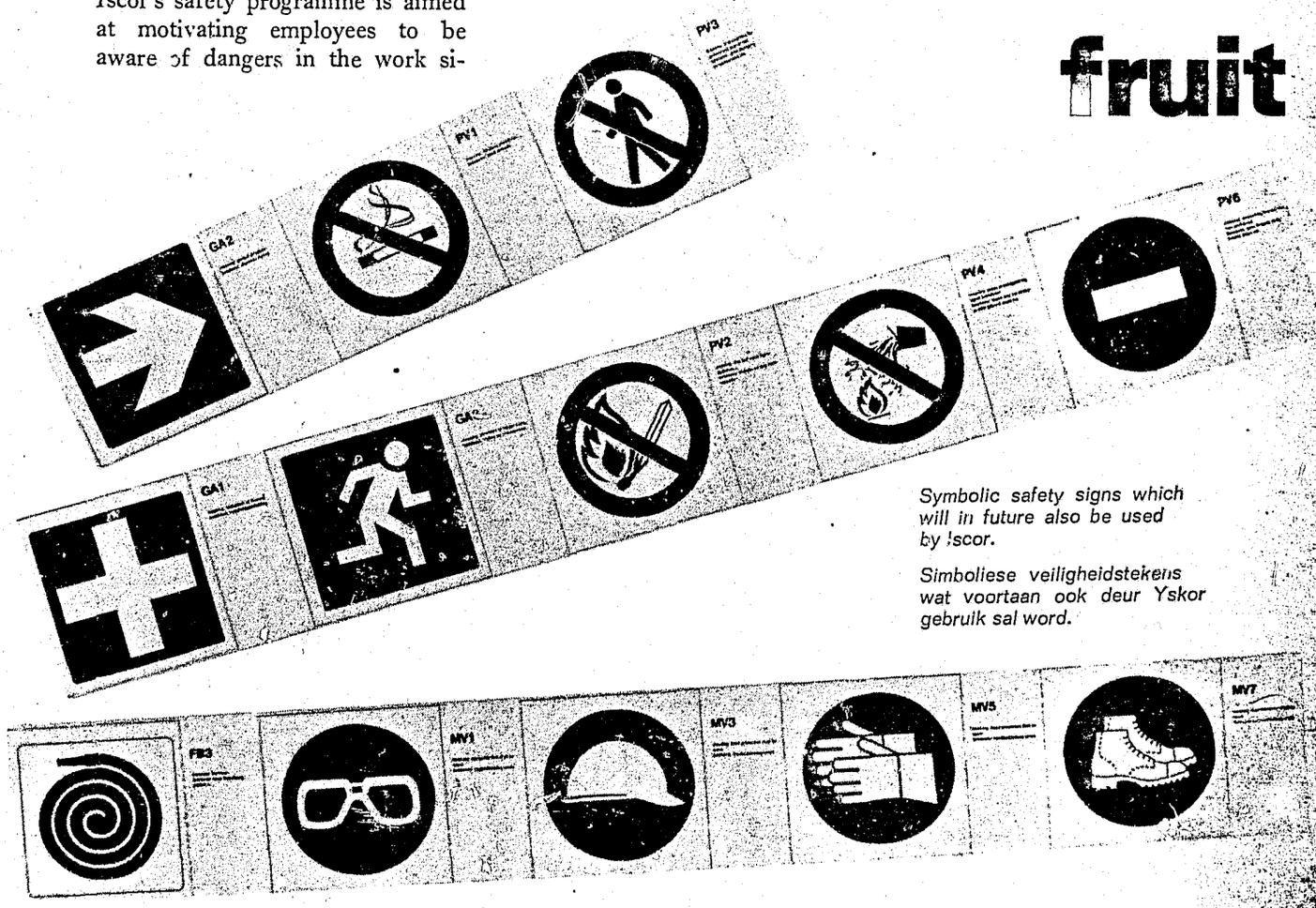
Safety at Iscor has developed from the original concept of accident investigation to that of accident prevention. The idea is to investigate all accidents, whether or not they resulted in injury or material loss. By doing so, remedial measures can be taken before the same causes produce a more serious result. It is also a well-established fact that for every accident resulting in injury, there are many others which cause machine damage and production delays.

The Corporation's safety function has been part of the Personnel Department's responsibilities since the early fifties. The reason is that Iscor's safety programme is aimed at motivating employees to be aware of dangers in the work situation and to act safely.

The main functions of the Safety section are to examine the causes of accidents, find ways to eliminate them and prevent accidents and to advise, assist, train and motivate employees to follow safe working practices. This section has to bring dangers at work and elsewhere to the attention of management and help eliminate them. If it identifies a risk in the specialized fields of air and water pollution control, industrial hygiene, health and industrial disease, fire prevention and security, the Safety section reports it to management for attention by specialists in these fields.

The Safety organization at Iscor, apart from investigating accidents and taking preventive action, is involved in safety inspections, safety training — including induction courses and in-plant training — and safety promotion and publicity by means of competitions, posters and articles. Programmes are launched to promote better housekeeping; safety committees have been established to involve employees at all levels. Finally, safety regulations are drawn up and enforced and safety equipment is provided and its use encouraged.

To make a meaningful evaluation of the accomplishments of the



Symbolic safety signs which will in future also be used by Iscor.

Simboliese veiligheidstekens wat voortaan ook deur Yskor gebruik sal word.

Corporation's safety programme, and also to make a comparison possible with own past experience and the performance of other firms in the steel industry locally and overseas, the internationally used disabling injury frequency rate was also adopted by Iscor as a criterion. A disabling injury is defined as one which results in absence from work by the injured for one or more shifts. The frequency rate is expressed as the number of lost-time injuries per million man-hours worked.

On the basis of injury frequency rate, the various works and mine centres have been competing since 1952 on a continuous basis for the

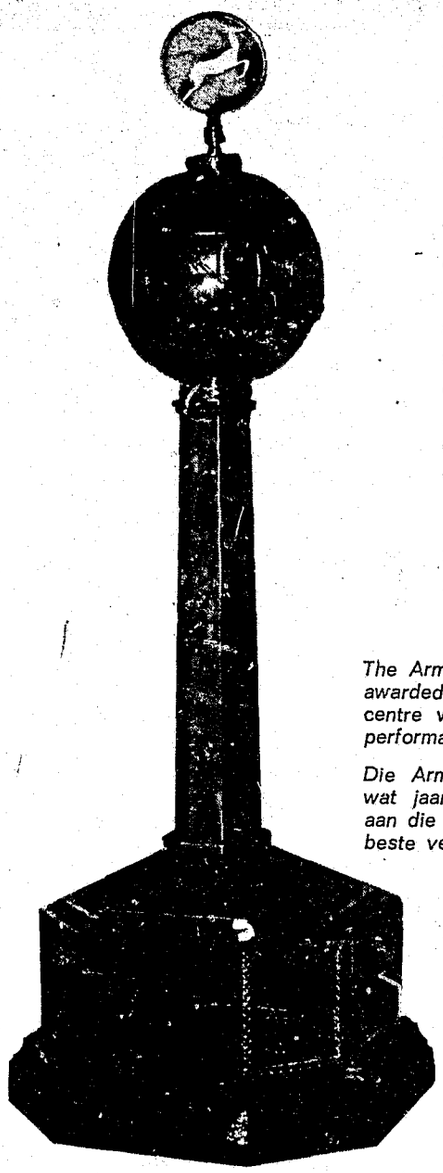
KORTLIKS

VEILIGHEID by Yskor het 'n evolusie ondergaan vanaf die vroeëre ongeluksondersoeke na ongeluksvoorkoming. Die gedagte is om alle ongelukke te ondersoek, ongeag of hulle besering of verlies tot gevolg gehad het. Sodoende kan regstellende stappe gedoen word voordat dieselfde oorsake 'n ernstiger gevolg het.

Die Korporasie se veiligheidsfunksie ressorteer sedert die vroeë vyftigerjare onder die Departement Personeel. Die hooftake van die Veiligheidseksie is om die oorsake van ongelukke te ondersoek, maniere te vind om hulle uit te skakel en om werknemers te adviseer, behulpsaam te wees, op te lei en te motiveer om veilig te werk. Een van die metodes wat aangewend word om veiligheid te bevorder, is om intersentrum-kompetisies te hou. Dit geskied op 'n deurlopende grondslag, en die wenner word bepaal op die basis van verbetering van beseringsfrekwensiesyfers. Die wisseltrofee wat hiervoor toegen word, staan as die Armco-trofee bekend.

Employees at a steel melting plant teeming bay have to wear full safety equipment.

Werknemers by 'n staalsmeltery se giethal moet volle veiligheidstoerusting dra.



The Armco Safety Trophy, awarded annually to the Iscor centre with the best safety performance.

Die Armco-veiligheidstrofee, wat jaarliks toegeken word aan die Yskor-sentrum met die beste veiligheidsprestasie.

Armco Safety Trophy — a floating trophy awarded annually to the centre with the best improvement in frequency rate over a period of three years.

This trophy was presented to Iscor in 1950 by the Armco Steel Corporation of the USA to be used in a safety competition among the Iscor centres. It was a gift to commemorate the visit of a group of Iscorians to the Armco Works at Middletown, Ohio, where a similar safety trophy was already being competed for.

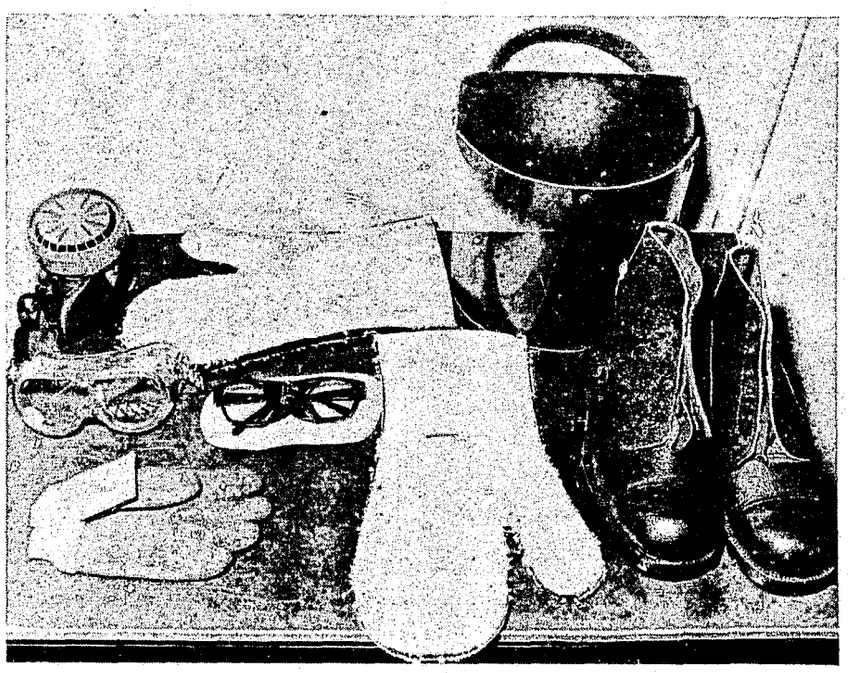
A study of the injury frequency rates since the introduction of the inter-centre competition for the Armco Trophy shows a significant reduction in the number of injuries.

For example, the frequency rate for Pretoria dropped from 27,1 in 1951 to 3,26 in 1978, that for Vanderbijlpark from 18,9 in 1951 to 3,98 last year and that for Thabazimbi from 85,9 to 11,04. At Sishen, the rate dropped from 33,34 in 1954 — mining operations having started in 1953 — to 3,15 in 1978 and at Durnacol from 94,77 in 1955 — Iscor acquired the mine in 1954 — to 18,8 last year. Newcastle, which entered the competition in 1970 with 35,4, reduced its frequency rate to 4,8 in 1978.

It is also interesting to note from statistics compiled by the National Occupational Safety Association (NOSA) on reports by 383 firms that Iscor's injury frequency rates compare exceptionally favourably with those of others in South Africa. For example, the average rate for the Corporation's three works centres is 4,11, compared with 10,6 for altogether 79 NOSA firms in the iron and steel industry in the northern Transvaal. The average injury frequency rate for Iscor's mining centres, including the two dolomite mines, is 12,7, as against 14,6 for the 42 northern Transvaal mining companies affiliated with NOSA.

Even when compared with such a giant in the field of safety as the USA, the Corporation's figures are quite impressive. The injury frequency rate in the US steel industry as a whole was 4,45 in 1976 (the last year for which comparable data are available), as against an average 4,41 for Iscor's three works centres in the same year.

These facts are greatly to the credit of Iscor's safety programme and reflect the conscientious efforts of the different centre managements, according to a special memorandum for directors prepared by the Personnel Department.



Some of the safety equipment worn at Iscor centres.

Party van die veiligheidstoerusting wat by Yskor-sentrums gedra word.

'n KLERKSDORPSE firma, Bond Industries, wat minder as twee dekades gelede as 'n eenmansaak tot stand gekom het, het gedurende die afgelope ekonomiese maer jare 'n gesofistikeerde produk ontwikkel waarop hy trots kan wees . . . 'n produk wat nie alleen die Republiek buitelandse valuta bespaar nie maar moontlik ook 'n uitvoermark sal vind.

Die firma het vyf jaar, en sowat R800 000, bestee aan die ontwikkeling van 'n vurkhyswa (die Hydron genoem) wat hy self ontwerp het. Verlede jaar is met die bemarking daarvan begin, en die produk het so gunstig met ingevoerde vurkhyswaens vergelyk dat 'n geredelike mark daarvoor gevind is. Binne 'n jaar is meer as 80 verkoop en tans is die Hydron die firma se hoofproduk, wat sowat 80 persent van sy omset uitmaak.

Vir die ontwikkeling van die Hydron was vader en seun verantwoordelik: mnr. Fred Senekal, wat 18 jaar gelede die firma as 'n diensnywerheid vir myne begin het, en sy seun, mnr. Errol Senekal, wat tans in beheer van die firma is.

Die idee om self 'n vurkhyswa te vervaardig, het by hulle ontstaan in 'n stadium toe Bond Industries een wou koop vir sy diensbedrywighede. Destyds was daar 'n tekort aan vurkhyswaens — die meeste is ingevoer — en die firma het dit moeilik gevind om een te

'n Hydron 3000-vurkhyswa, wat deur Bond Industries ontwerp en in sy fabriek op Klerksdorp vervaardig is, word deur mnr. Errol Senekal, 'n direkteur van die firma, bestuur.

A Hydron 3000 fork-lift truck, designed by Bond Industries and manufactured in its Klerksdorp factory, is driven by Mr. Errol Senekal, a director of the firm.

Briefly

BOND INDUSTRIES, a Klerksdorp firm, spent five years, and about R800 000, on the development of a fork-lift truck. Marketing of the product commenced last year, and within a year over 80 units were sold. At present the Hydron (the truck's trade name) is the firm's main product, accounting for about 80 per cent of the turnover.

The men responsible for the development of the Hydron are Mr. Fred Senekal, who founded the firm 18 years ago, and his son, Mr. Errol Senekal. Their aim was to produce a fork-lift truck which would be simple to operate, relatively maintenance-free and for which spare parts would be readily obtainable.

Extensive market research was carried out, and it was decided to make use of hydrostatic transmission . . . the latest trend in Europe. Today the firm is confident that the Hydron compares well with the best imported fork trucks.

Initially only 3 and 4-ton capacity trucks were manufactured, but larger units, with capacities of up to 15 tons, are soon to be produced. The firm is also looking at the export market, as it believes that its product can compete with the best in the world. Despite the breakthrough it has achieved with the Hydron, Bond Industries still believes in diversification and produces special-application machines in its new factory, which was completed early last year.

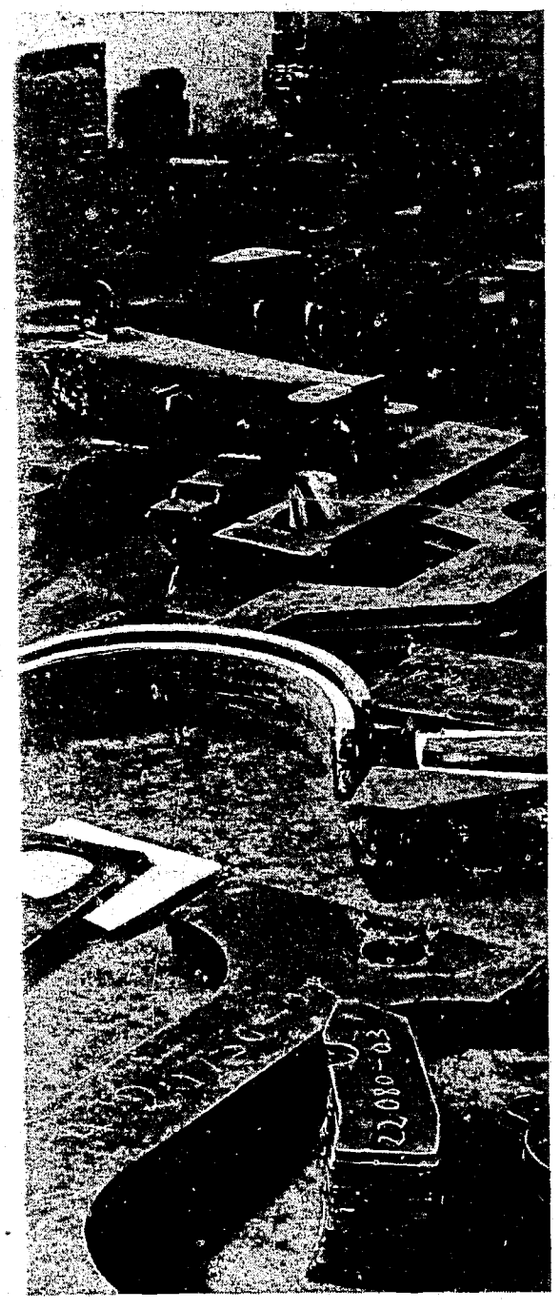
Vurkhyswa in maer jare ontwikkel

Die Hydron, wat geen ratte en koppelaar het nie, word maklik bestuur. Effense druk op die versnellerpedaal laat die hyswa stadig, sonder rukkerigheid, beweeg.

The Hydron, having no gears and clutch, is easy to operate. Slight pressure on the accelerator pedal causes the truck to move slowly, without jerking.

Staalkomponente vir groter vurkhyswaens wat in Bond Industries se fabriek gebou sal word.

Steel components for larger fork-lift trucks which are to be built in Bond Industries' factory.



bekom. Toe het die Senekals besef dat daar 'n potensiaal moet bestaan vir die plaaslike vervaardiging daarvan.

Bond Industries het uitgebreide marknavorsing gedoen, in die Republiek en die Verenigde Koninkryk. Dit het geblyk dat daar in Europa, wat nywerheidsmasjiene betref, en veral vurkhyswaens, na hidrostatiese aandrywing oorgeskakel is.

Die doelwit was om 'n masjien te vervaardig wat betreklik eenvoudig funksioneer, so min moontlik instandhouding verg en waarvoor onderdele geredelik beskikbaar sou wees.

Met die bou van die vroeë prototipes, wat eintlik mobiele toetseenhede was, het heelwat tegniese probleme opgeduik, maar die Senekals het nie moed opgegee nie en algaande oplossings gevind. Dit was aanvanklik ook moeilik om staal van die regte gehalte te verkry, maar met tegniese advies wat by Yskor ingewin is, kon staal van die korrekte spesifikasies later verskaf word.

Die ontwikkeling van die Hydron het dit vir Bond Industries nodig gemaak om sy werkwinkelfasiliteite uit te brei. Inderdaad is 'n nuwe fabriek oor die bestaande een gebou en vroeg verlede jaar voltooi. Weens die firma se groeiende bedrywighede sal die fabriek verder uitgebrei moet word.

Gelukkig kon finansiering van die Nywerheidontwikkelingskorporasie verkry word vir die duur Hydron-projek.

Dit het geblyk dat die voordele van hidrostatiese aandrywing, wat nog bra ongewoon in Suid-Afrika was, die nadele oortref. Vir die Hydron se gevorderde ontwerp is heeltemal weggedoen met die konvensionele, kragabsorberende stelsel van ratte, koppelaar, ewenaar en dryfasse. Die dieselenjin dryf 'n hidrouliese pomp aan wat die wiele regstreeks van krag voorsien deur middel van hidrouliese wielmotore. „Dit bied al die voordele van

outomatiese aandrywing, sonder die ingewikkeldheid daarvan," sê mnr. Errol Senekal.

Hidrostatiese aandrywing is feitlik bedryfsproef en dit is ideaal vir ongeskoolde arbeid, veral in die mynbedryf.

Die Hydron vertoon stewig en aantreklik en is 'n ware „mossie maar man". Stuurgemak is 'n kenmerk van die hyswa, wat met 'n geringe druk op 'n pedaal sonder rukkerigheid vorentoe of agtertoe beweeg. Wanneer die pedaal skietgegee word, is daar doeltreffende remming, sodat dit eintlik nie nodig is om van die voetrem gebruik te maak nie.

Bond Industries probeer steeds om die plaaslike inhoud van sy produkte so hoog moontlik te hou. Volgens waarde is die plaaslike inhoud van die Hydron nagenoeg 85 persent. Bykans 1½ ton Yskorstaalplaat word gebruik vir die bak van 'n Hydron 3000 (dit het 'n vermoë van 3 ton) — die kleinste tipe wat tans deur die firma vervaardig word.

In die vurkhysermark is die grootste aanvraag vir eenhede met vermoëns van 2 en 3 ton. Bond Industries het nog nie een van 2 ton vervaardig nie, maar het ontwerpveranderings aangebring wat die produksie van die Hydron 2000 ekonomies sal maak.

Die firma is reeds besig om die Hydron-reeks uit te brei. Afgesien van hyswaens met vermoëns van 3 en 4 ton, is so pas ook begin met die produksie van eenhede met vermoëns van 5 en 7 ton, en daar word beplan om 15 tot 20 van hierdie masjiene jaarliks te vervaardig. Nog groteres, met vermoëns van 8 tot 15 ton, sal ook geproduseer word; lisensieregte daarvoor is reeds van 'n maatskappy in Engeland verkry. Die groter vurkhyswaens sal veral aan die kus bemark word, want in die hawens word baie daarvan gebruik gemaak.

Die bemarking van Hydron-vurkhyswaens word behartig deur 'n Randse firma met takke dwarsdeur die land. Markte sal na verwagting ook in ander lande gevind word.

Bond Industries produseer nie net vurkhyswaens nie. 'n Groot verskeidenheid masjiene word in die fabriek vervaardig, veral vir spesiale aanwendings, waar probleme met konvensionele masjiene ondervind word.

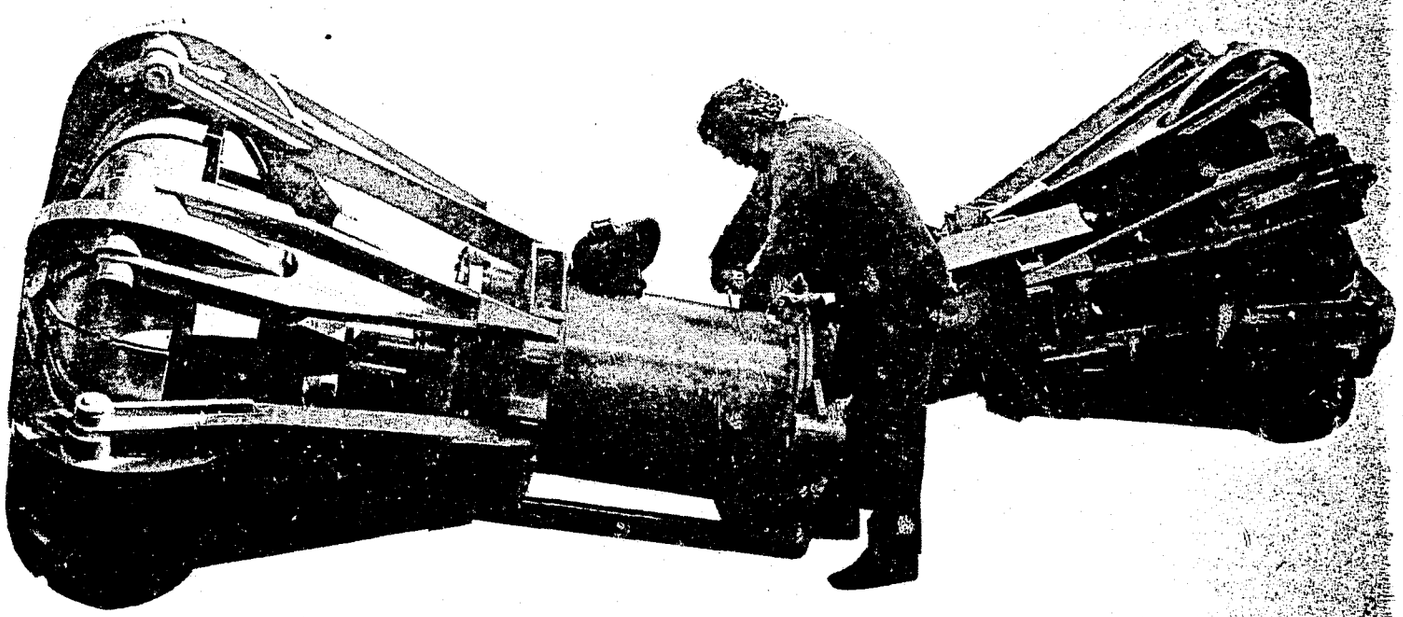
'n Interessante nuwe masjien is onlangs gebou om by die kopermyn op Phalaborwa op die proef gestel te word. Die basiese funksie van die mobiele sikloontuig, soos dit genoem word, is om damwalle te gooi. Daar sal growwe materiaal en slik, wat tydens koperontginning ontstaan, deur die masjien se siklone gepomp word, en uit die slik sal water geskei en na 'n dam gepomp word vir hersirkulasie in die aanleg. Die growwe materiaal sal deur 'n „slurp" aan die masjien uitgeblaas word om 'n damwal te bou.

Op sy drie breë bande is die masjien baie stabiel, sodat hy nie maklik sal omslaan op die ongelyke, modderige terrein waaroor hy sal beweeg nie. Afgesien van die enjin en hidrouliese komponente, is die masjien hoofsaaklik van Yskor-staal gebou. Indien die prototipe wat vervaardig is, 'n suksesvolle vuurdoop (oftewel modderdoop) het, sal 'n hele paar daarvan gebou word.

Bond Industries, wat van 'n klein diensnywerheid tot 'n betreklik groot vervaardigingsnywerheid gegroei het, voel gelukkig oor die deurbraak wat met die Hydron in die vurkhyswamark gemaak word, maar hy glo nog sterk aan diversifikasie en hou steeds 20 persent van die fabriek se kapasiteit uit vir die vervaardiging van ander produkte vir myne en nywerhede. „Diversifikasie," sê mnr. Errol Senekal, „het ons in die moeilike jare in staat gestel om kop bo water te hou. En al behaal 'n mens sukses met 'n bepaalde produk, is dit altyd verstandig om 'n agterdeurtjie oop te hou . . . "

Mynboutoerusting wat deur Bond Industries vervaardig is.

Mining equipment manufactured by Bond Industries.



Concrete being pumped from a bulk concrete transporter to cast the foundation floor of the vacuum degassing plant. Note the steel safety wall on the left.

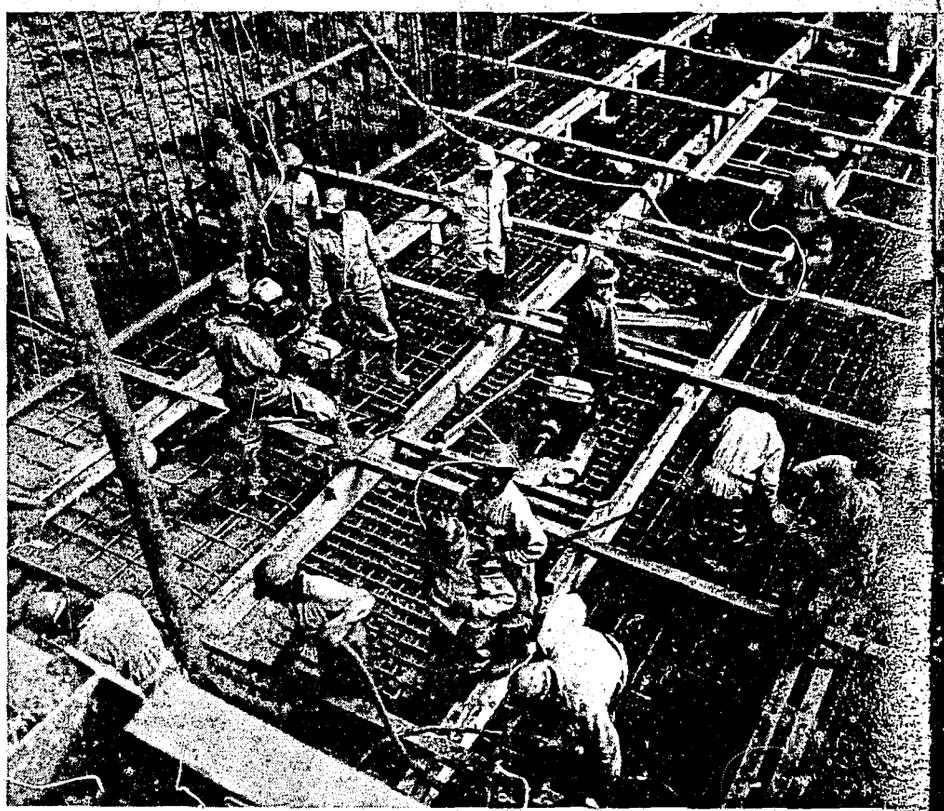
Beton word uit 'n grootmaat-betonvervoerder gepomp om die fondamentvloer van die vakuumontgassingsaanleg te giet. Let op die staalveiligheidsmuur links.

Iscor lays foundations for new plant

CIVIL ENGINEERING work for the vacuum degassing plant under construction at Iscor's Pretoria Works is being carried out by the Civil Engineering section of the Works Engineering division. Sited in an extension of the rotor plant building, the new installation will be capable of treating over 125 tons of liquid steel per hour, reducing the oxygen and hydrogen contents to the levels required by various steel specifications (see *Iscor News*, July 1979).

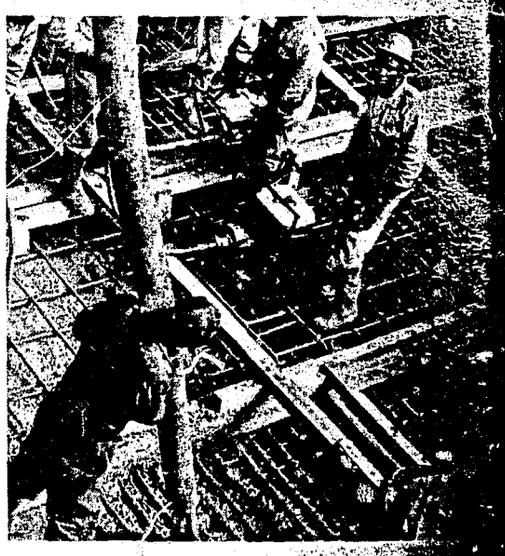
The main contractor is Infurnco (Pty) Limited, of Boksburg, in collaboration with Vacmetal Gesellschaft Für Vakuum-Metallurgie MBH, of West Germany, and the French firm of Heurtey Metallurgie. The civil engineering work, which covers the provision of foundations for building extensions, the main plant and various services, is valued at over R500 000 and is one of the major civil engineering projects undertaken by Civil Engineering since 1977, when the section's operations were extended to include work previously carried out by outside contractors.

This development, initiated when the slowed tempo of Iscor expansion resulted in a reduction of the civil engineering operations at the Pretoria Works, has proved justified. A comparison of the costs of work done by the section with the costs that would have been incurred had former contracts remained in operation, has revealed a significant saving to the Corporation.



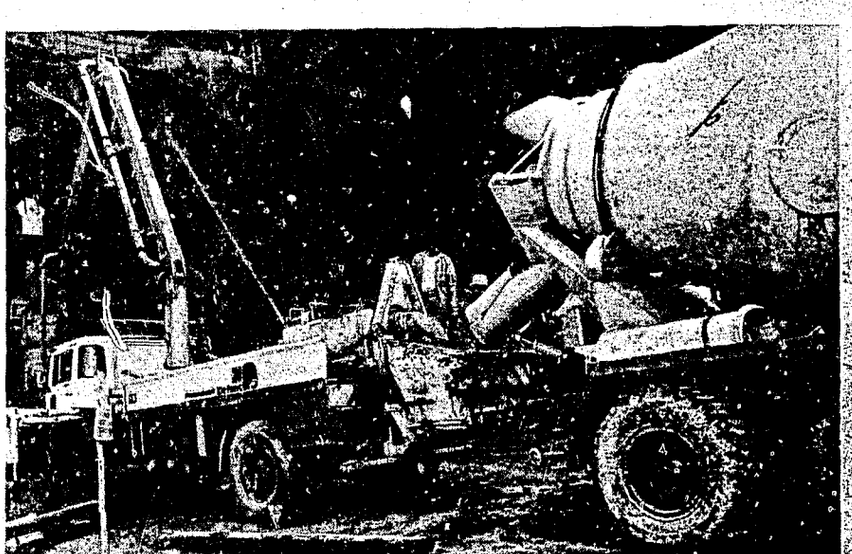
This photo of the floor of the foundation shows part of the 120 tons of reinforcing steel used.

Hierdie foto van die vloer van die fondament toon 'n deel van die 120 ton wapeningstaal wat gebruik is.



The floor of the foundation being cast in one continuous operation.

Die vloer van die fondament word in een deurlopende werksaamheid gegiet.



A bulk concrete transporter and one of the two pumps used to cast the concrete foundations.

'n Grootmaat-betonvervoerder en een van die twee pompe wat vir die giet van die betonfondamente gebruik is.

One of the column foundations for the vacuum degassing plant project.
Een van die kolomfondamente van die vakuumontgassingsaanleg-projek.

On a project such as the construction of the vacuum degassing plant, Civil Engineering works very closely with the other sections of Works Engineering. In consultation with production and maintenance personnel, the Project section establishes the extent and requirements of the project, initiates the calling for tenders and the award of contracts and then coordinates the activities of all parties concerned. Project Planning and Control is responsible for the computerized planning of the project, ensuring that the multiplicity of activities is undertaken in a logical predetermined sequence. Design for the civil engineering work was carried out by Civil Engineering, based on the main contractor's stated requirements.

The rotor plant building is being extended eastwards to house the vacuum degassing plant and services. The adjoining stripping bay is being extended to the east and west. In addition to the main plant, these extensions will also house new service installations, which include a ladle tilting stand, horizontal ladle driers, teeming platforms and a ladle transfer car. The existing ladle repair pit will be deepened and widened, and other service installations will include a concrete cooling tower and a water treatment plant.

Motor vehicle access to the area east of the casting bay is limited to two relatively narrow rail track passages north and south of the rotor plant. These tracks serve the Bessemer and the open-hearth plants east of the rotor plant and impinge on the intervening area where the steelwork for the extentions is being erected. The congestion in this area resulted in the adoption of narrow and deeper piled column foundations in preference to larger conventional types without piles. Piling and column foundations have been completed, involving 440 m³ of concrete. Building columns had to be spaced to provide adequate room for the passage of rail traffic and, in one instance, a heavy fabricated 4,2 m deep steel beam was required to support the 200-ton gantry cranes over the 26 m span involved.

The limited access also restricted operations in the construction of the extensive main plant foundations immediately east of the rotor plant. These foundations are in the form of a concrete-lined tip, involving a 3 000 m³ excavation to a depth of 8,5 m. The walls of the excavation were stabilized by rock anchoring — cables were positioned and grouted in holes drilled in the walls and were then tensioned against steel wall supports. A ramp provided access on the east side — the only open side of the excavation. Also required was a safety wall on the north side of the excavation to protect construction personnel from the hazards associated with moving hot-metal ladles and the teeming of ingots. This was fabricated and erected by the Engineering Construction section.

Limitations in time and access also precluded the use of Civil Engineering's own concrete batching and placing equipment. Instead, the mixed concrete was conveyed to the site from an outside bulk supplier by concrete transporters, and in a carefully controlled continuous operation it was discharged into two truck-mounted concrete pumps fitted with gooseneck delivery pipes which were manoeuvred to place the concrete where required. In this way the 255 m³ of concrete for the foundation floor was placed in one eight-hour operation; the use of Iscor equipment would have necessitated that it be done in sections over a much longer period.

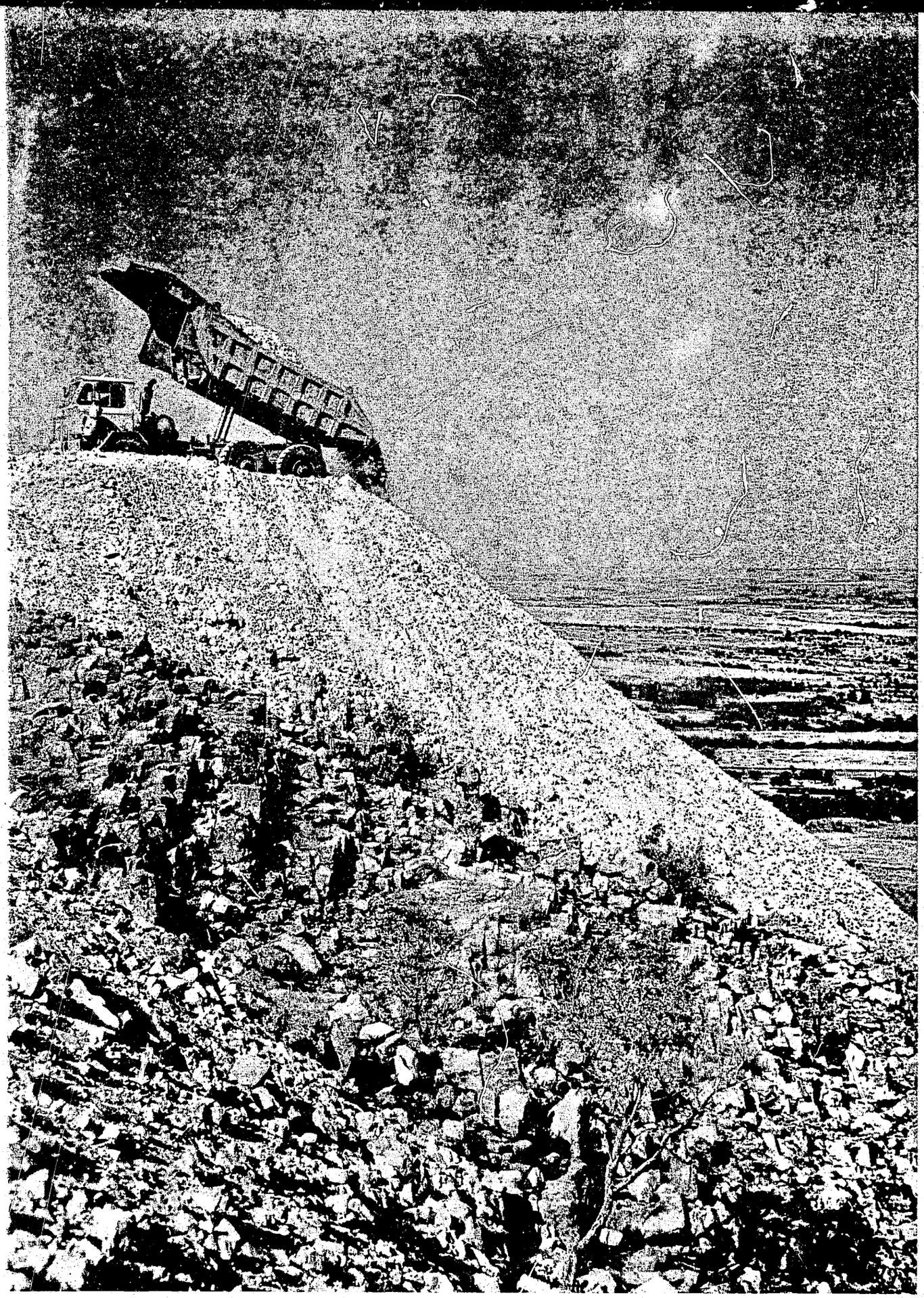
The foundation walls are being cast in four lifts. A total of about 880 m³ of concrete and 120 tons of reinforcing steel will be used for these foundations.

KORTLIKS

DIE SIVIELE konstruksiewerk vir die bou van 'n vakuumontgassingsaanleg in die Pretoria-werke word deur Siviele Ingenieurswese, 'n seksie van die afdeling Werke-ingenieurswese, uitgevoer. Die siviele werk, ter waarde van meer as R500 000, behels die bou van fondamente vir uitbreidings aan die rotoraanleggebou, die ontgassingsaanleg en bykomende installasies. Dit is een van die groot ondernemings wat deur Siviele Ingenieurswese aangepak is sedert die seksie in 1977 konstruksiewerk begin aanneem het wat voorheen deur buitekontrakteurs uitgevoer is.

Die hoofaanlegfondamente het uitgrawings van ongeveer 3 000 m³ geverg. Nagenoeg 880 m³ beton en 120 ton wapeningstaal sal vir die fondamente van die hoofaanleg gebruik word. Beton word deur grootmuatvervoerders na die uitgrawing gebring en met betonpompe daarin gepomp. Die 225 m³ beton vir die vloer van die fondament is deurlopend oor 'n tydperk van agt uur gegiet.

Die vakuumontgassingsaanleg sal die waterstof- en suurstofinhoud van vloeistaal verminder tot die standaarde wat deur verskeie staalspesifikasies vereis word.



Stort

Gedruk deur Perskor, Doornfontein, Johannesburg

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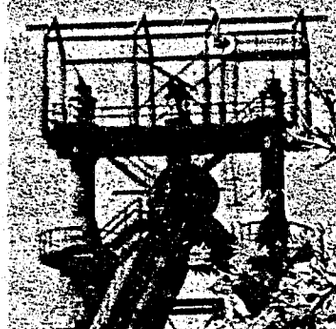

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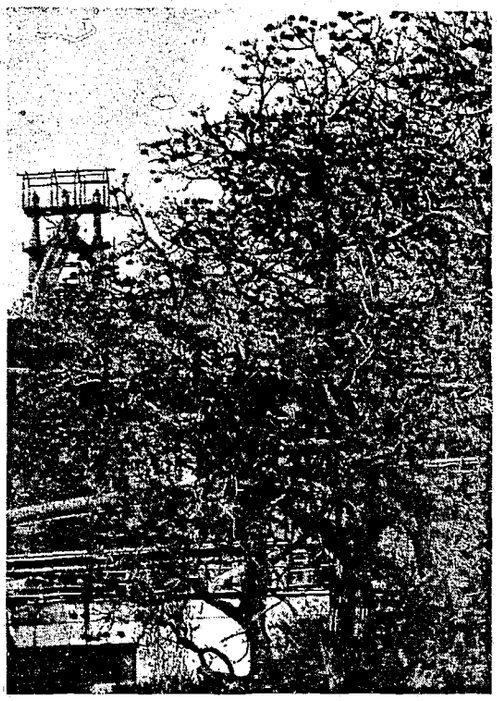

Cover

A blaze of colour at the Pretoria Works.

Voorblad

Kleureprag by die Pretoria-werke.

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THE JOURNAL OF THE SOUTH AFRICAN IRON AND STEEL INDUSTRIAL CORPORATION, LIMITED

DIE TYDSKRIF VAN DIE SUID-AFRIKAANSE YSTER EN STAAL INDUSTRIËLE KORPORASIE, BEPERK

P.O. Box 450, Pretoria, 0001 Telephone 41-4111
Posbus 450, Pretoria, 0001 Telefoon 41-4111

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RESEARCH a valuable tool

THE RELATIVELY long distances between Iscor and other world steel manufacturers — leaders in the field in Europe, Japan and the USA — have deprived the Corporation of the benefits of adequate outside research facilities in its own or neighbouring countries. Nevertheless, this remoteness has had the salutary effect that Iscor's own Research and Process Development Department has become not only indispensable to the Corporation's main and ancillary operations, but also a valuable aid in solving problems, removing obstacles and contriving improvements.

Kortliks

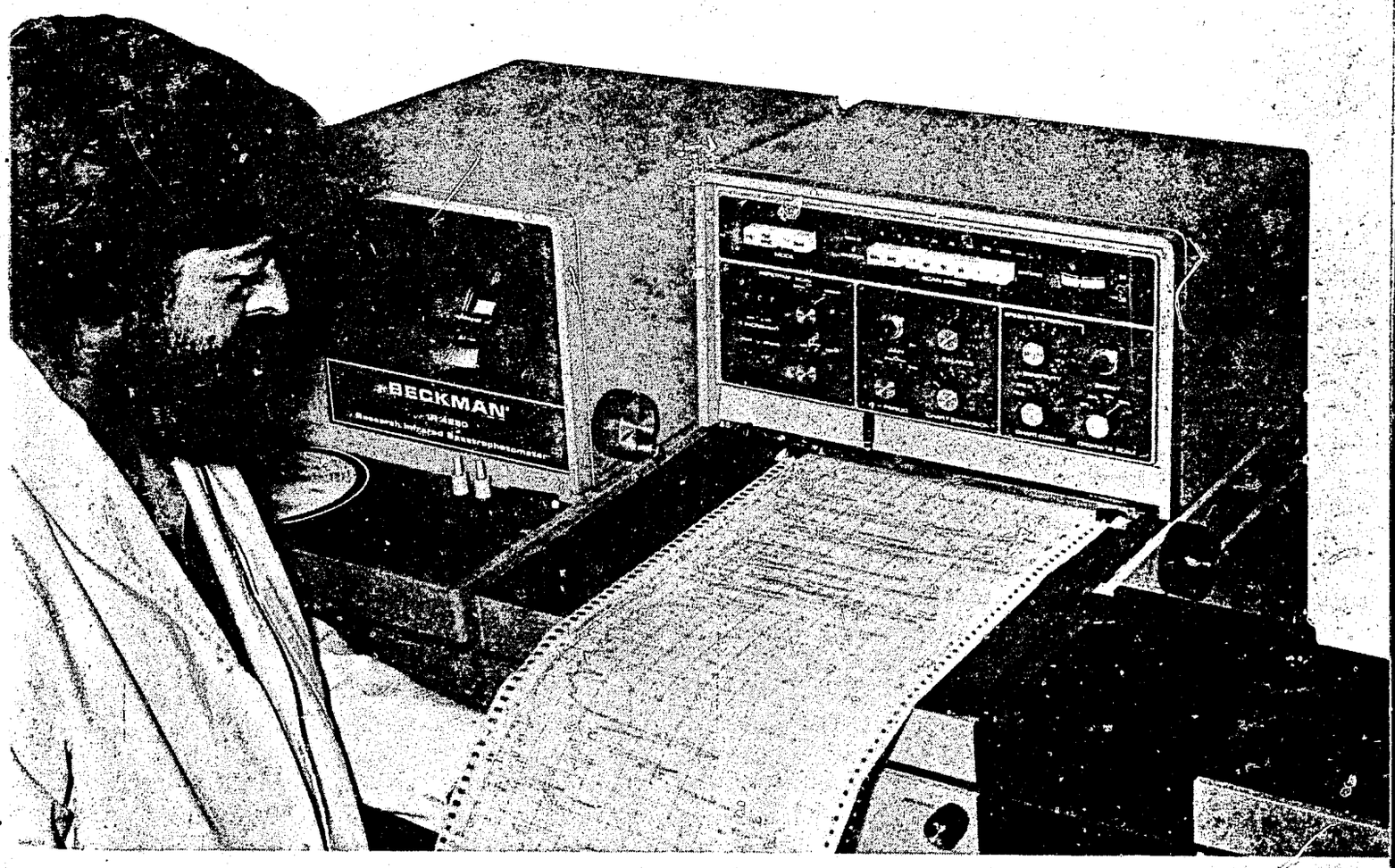
VANWEË die betreklik lang afstande tussen Yskor en ander staalvervaardigers van wêreldformaat in Europa, Japan en die VSA, moet die Korporasie die voordele ontbeer van afdoende buitegeriewe vir navorsing in sy eie of buurlande. Nietemin het hierdie afgesonderheid die voordelige uitwerking gehad dat Yskor se eie Departement Navorsing en Prosesontwikkeling nie slegs onontbeerlik vir die Korporasie se hoof- en bykomende werksaamhede geword het nie, maar ook 'n waardevolle hulpmiddel by die oplos van probleme, die verwydering van struikelblokke en die ontwikkeling van verbeterings.

Die departement bestaan uit drie afdelings: Materiaalnavorsing, Ingenieursnavorsing en Prosesontwikkeling. Laasgenoemde is in die Proefaanleg by die Pretoria-werke gehuisves, en eersgenoemde twee in die navorsingsblok van die Hoofkwartiergebou.

Met die moderne laboratoriums en toerusting tot hul beskikking, doen die verskillende seksies in die departement werk van hoogstaande gehalte, wat die Korporasie in baie gevalle groot bedrae geld bespaar.

An infra-red (IR) spectrophotometer, used inter alia for the analysis of complex organic mixtures in the Organic Chemistry section. Reading the spectrum is Mr. E. J. H. du Plessis, Senior Research Officer.

'n Infrarooi-spektrofotometer wat onder andere gebruik word vir die ontleed van komplekse organiese mengsels in die seksie Organiese Chemie. Mnr. E. J. H. du Plessis, Senior Navorsingsbeampte, lees die spektrum.



The department comprises three divisions: Materials Research, Engineering Research and Process Development, the latter being housed in the Pilot Plant at the Pretoria Works. The two research divisions occupy the research block of the Corporation's Headquarters building, containing modern laboratories and up-to-date equipment, and also operate laboratories at the works centres.

The Materials Research division handles Physical Metallurgy as one of its functions, in which area valuable work is done in the preparation of standards for the calibration of spectrometers at the works and mines laboratories, as well as those at Headquarters. Previously these standards had to be obtained at considerable cost from the National Bureau of Standards in the USA, but today not only Iscor's own needs are met by this section, but also those of other South African steel producers.

The Physical Analysis section of the division is involved in the physical methods of analysis, which are gradually replacing the wet chemical methods. The physical methods include emission spectroscopy, X-ray fluorescence and the more recent atomic absorption. This section has done valuable work on the glow discharge lamp used in emission spectroscopy, and today the laboratory at the Vanderbijlpark Works is the only steelworks laboratory in the world which uses the glow discharge lamp on a routine basis.

During the past year, 2 075 atomic absorption analyses a month were handled on average, which would have cost the Corporation a total of about R240 000 if an outside concern had done them.

A third section of Materials Research is Chemical Analysis, which continues to form the basis of all analysis. This section provides analytical services to the department and is responsible for the analysis of export ores. Physical analysis is based on standards determined by absolute chemical methods — one of the functions of this section. Another is to ensure that analyses carried out at the mines are correct by analysing monthly composites received from them.

Mineralogy is the section responsible for the important function of coal petrography. It is interesting to note that Iscor is a world leader in this field as far as the instrumentation is concerned which was developed and built by the Research and Process Development Department. In this regard, particular mention should be made of the scanning microscope table and the automation of the analysis process.

The Organic Chemistry section is concerned with all aspects of by-product chemistry. A new IR spectrophotometer was recently acquired and has a high resolution capability in the analysis of complex organic mixtures. This section does a large amount of work on oil and coal analysis, and a long-term project is to trace the origin of strip dirt, which is causing some concern at the Vanderbijlpark Works.

The other research division, Engineering Research, deals with process control, process systems, process engineering, engineering metallurgy and technical services. The latter include two well-equipped workshops and other facilities for high-precision work. The Process Control section has been responsible for some outstanding work on burden control on blast furnaces at Newcastle and Vanderbijlpark. It has developed computerized systems of burden control, including efficacious mass and moisture measuring at considerably lower cost than commercially available systems of doubtful efficiency.

In the field of thermography, Iscor is ahead of other world steelworks in the utilization of this powerful IR technique of remote temperature measurement. Some useful applications are the examination of hot-blast stoves, blast furnace exteriors, torpedo cars, switchgear and hot train wheels. With the aid of thermography it is possible for the first time to look into the top of a blast furnace while in operation, and the potential benefits are enormous.

Process Systems is the section which has developed the data monitoring system at Sishen, which has made the life of plant superintendents much easier. This section is presently looking at the automation of certain facets of the sampling plant at Saldanha Bay, which will facilitate the system's compliance with ISO requirements.

The Process Engineering section is planning to build a new laboratory for fracture mechanics at the Pilot Plant to meet the demand from customers for the fracture mechanical properties of the Corporation's steels. Another task of the section is to construct and maintain or repair loadcells — a field in which Process Engineering has saved Iscor many thousands of rands. The section also operates a high-speed camera, which has proved invaluable in diagnosing problems on rapidly moving equipment, such as flying shears.

Welding of metals has been elevated during the past few years from a trade to a full-fledged technology, and a major part of the work of the Engineering Metallurgy section is concerned with welding technology. Symposiums and training courses for both Iscorians and people from outside are held regularly at various centres. An interesting aspect of the work of Engineering Metallurgy is powder coating, and thousands of rands have been saved by the building-up of worn gears, axles and rolls.

Finally, there is the Process Development division, perhaps better known as the Pilot Plant, and overseas visitors are often amazed at the facilities at its disposal. The Ore Preparation section, for ex-

ample, can crush tons of ore per hour under various conditions to determine the behaviour of the ore. Several beneficiation techniques may be applied, such as cyclones, jigs, heavy-medium, high-intensity magnetic separation and flotation.

Fundamental work on sinters and sintering at the Pilot Plant has contributed significantly to the success obtained with high-sinter burdens in Iscor's blast furnaces.

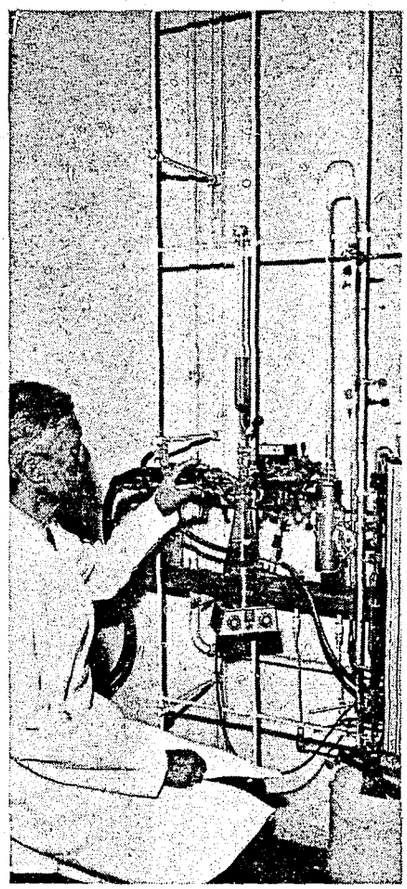
The Metallurgy section devotes much time to the determination of the quality of raw materials, e.g. the high and low-temperature strength of ores. One of the most important contributions of this section is the removal of alkalis from sinter by the addition of calcium chloride to the sinter mix, which has led to improved blast furnace operation and large savings. The section has also accumulated considerable know-how in the direct reduction field, and this technique is expected to play a significant role in Iscor's future.

Coal quality and the standardization of quality tests are the province of the Chemical Processing section, which controls the coal laboratories at Witbank and Newcastle. Small-scale and pilot-scale coke ovens were used over the years, and the results could be successfully correlated with those of full-scale ovens on the one hand and with coal petrography on the other. Years ago this section did pioneering work on formcoke and it possesses considerable know-how for possible application later.

In the Refractories section the development work covers bricks, clays and tiles, and there is a healthy co-operation between the Corporation and manufacturers of refractories. This section has saved Iscor many thousands over the years, a recent field being the use of sand instead of bricks as refractory material in hot-metal ladles. The sand slinging machine developed by the Corporation for this purpose was a great success.

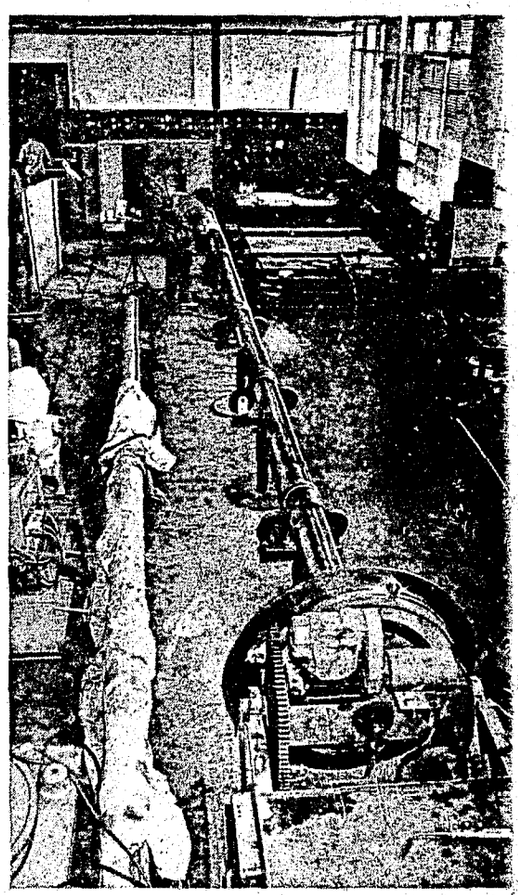
The glow discharge lamp vacuum spectrometer (left), used by Physical Analysis. Below it are samples awaiting analysis, and watching the read-out console is Mr. M. C. de Swardt, Principal Research Assistant.

Die glimontladingslamp-vakuumspektrometer (links), wat deur Fisiese Ontleding gebruik word. Onder hom is monsters wat ontleed moet word, en die afleeskonsole word dopgehou deur mnr. M. C. de Swardt, Hoofnavorsingsassistent.



Dr. P. F. A. van Lingen, Principal Research Officer, examining the condition of a transformer by analysing the transformer oil.

Dr. P, F. A. van Lingen, Hoofnavorsingsbeampte, ondersoek die toestand van 'n transformator deur die transformatorolie te ontleed.



The largest mining drill shafting used by Iscor being surfaced with tungsten carbide powder in the Engineering Metallurgy section.

Die grootste mynbooras wat deur Yskor gebruik word, word in die Ingenieursmetallurgie-seksie met wolframkarbiedpoeier hervlak.

'n Monster word by 'n elektriese boogoond geneem.

Taking a sample at an electric arc furnace.

Die embleem vir die Vanderbijlpark-werke se Zero Defekte-program.

The emblem for the Vanderbijlpark Works's Zero Defects programme.

DEFECTS ZERO DEFEKTE

ZDZDZD ZDZDZD

VANDERBIJLPARK

RIGHT FIRST TIME
REG EERSTE KEER

ZD-program in die kol

Die eerste merietetoekennings wat ingevolge die Zero Defekte-program by die Vanderbijlpark-werke gedoen is, is onlangs deur mnr. F. P. Kotzee, Afdelingshoofbestuurder (Staalbedryf), aan die wenners in vier kategorieë oorhandig. Op die foto verskyn, van links, voor: mnre. N. J. van Wyk, Superintendent, Stringgiet en Dienste (met die wisseltrofee vir die beste vordering), en D. C. van Zyl, administrateur van die program; agter: mnre. R. Brenkel, Bestuurder, Staalvervaardiging, S. B. Kloppers, Superintendent, Elektriese Boogoonde, Kotzee, J. G. Riddell, Hoofwerkebestuurder, en H. B. van der Merwe, Werkekontroleur.

The first merit awards made under the Zero Defects programme at the Vanderbijlpark Works, were recently presented to the winners in four fields by Mr. F. P. Kotzee, Divisional General Manager (Steel Operations). The photo shows, from the left, front row: Messrs. N. J. van Wyk, Superintendent, Continuous Casting and Services (with the floating trophy for the best progress), and D. C. van Zyl, administrator of the programme; back row: Messrs. R. Brenkel, [illegible]ager, Steel Manufacturing, S. B. Kloppers, Superintendent, Electric Arc Furnaces, Kotzee, J. G. Riddell, General Works Manager, and H. B. van der Merwe, Works Controller.

DIE ZERO DEFEKTE (ZD)-program wat in April 1978 by die Yskor-werke op Vanderbijlpark van stapel gestuur is met die oog op die vermindering van defekte, het 'n rol gespeel in die gunstige produksie- en versendingsprestasies wat tot dusver vanjaar by dié werke behaal is.

Tydens die onlangse oorhandiging van die eerste merietetoekennings ingevolge die program, wat sedert die begin van die jaar werkewyd toegepas word, het dit geblyk dat dit reeds mooi verbeterings in verskillende afdelings in die hand gewerk het.

Mnr. F. P. Kotzee, Yskor se Afdelingshoofbestuurder (Staalbedryf), wat die toekennings oorhandig het, het gesê dat 'n deurbraak klaarblyklik gemaak is om die betrokkenheid van werknemers te verkry. Hy meen dat die ZD-program nie slegs 'n bydrae gelewer het tot die werke se gunstige resultate sedert die begin van die jaar nie, maar ook tot die vordering wat gemaak is ten opsigte van die kwaliteit van produkte wat aan klante voorsien word.

„Ek glo dat die program, wat enig van sy soort by Yskor en

moontlik in Suid-Afrika is, met groot vrug ook by ander Yskor-sentrums ingestel kan word," het hy gesê.

Hy het die Hoofwerkebestuurder, mnr. J. G. Riddell („die vader van ZD by die Vanderbijlpark-werke"), mnr. D. C. van Zyl, wat die program administreer, en die ontvangers van toekennings gelukgewens met die prestasies wat behaal is. Mnr. Kotzee het self by dié geleentheid 'n ZD-lid geword en 'n lapelwapen en das van mnr. Riddell ontvang.

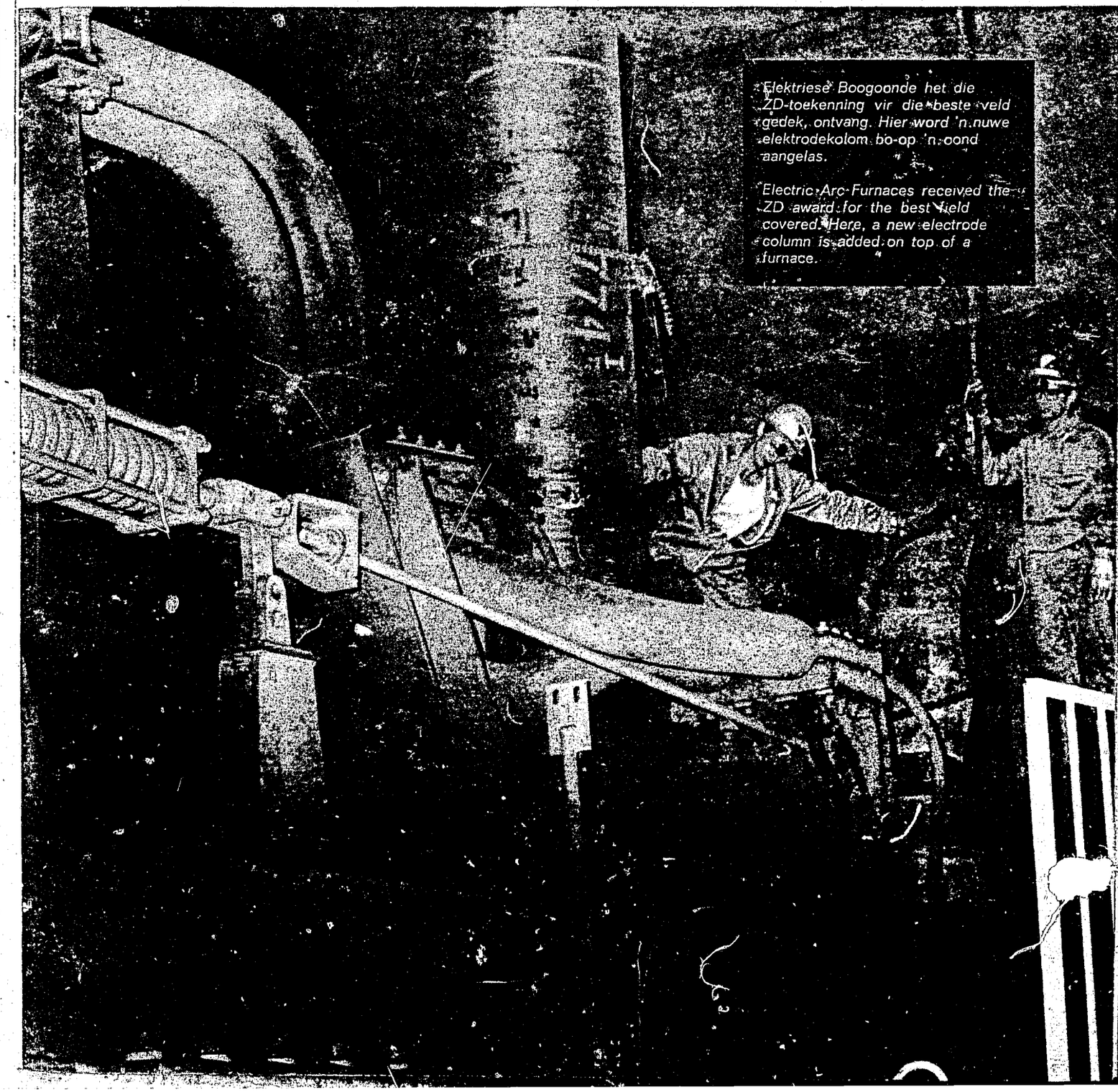
Die ZD-konsep is 'n moderne bestuurstegniek wat deur die VSA se verdedigingsbedryf ontwikkel is en tans deur firmas in baie dele van die wêreld toegepas word. Die sleuteldoelwitte van die program is die motivering van elke werknemer deur die bestuur om 'n taak die eerste keer reg te doen, om trots in sy werk te ontwikkel en om sodoende foute te voorkom (kyk *Yskornuus,* April 1978).

Hoewel deelname aan die program geensins verpligtend is nie, is meer as 75 persent van die Vanderbijlpark-werke se nagenoeg 13 200 Blanke werknemers reeds daarby betrek, en die ledetal groei steeds. Die program word tans ook vir Nie-Blanke werknemers ingestel.

Voorsiening word gemaak vir die erkenning van prestasies wat teenoor doelwitte behaal is. Die koördinerende komitee vir die program het besluit om toekennings in die volgende kategorieë te doen:

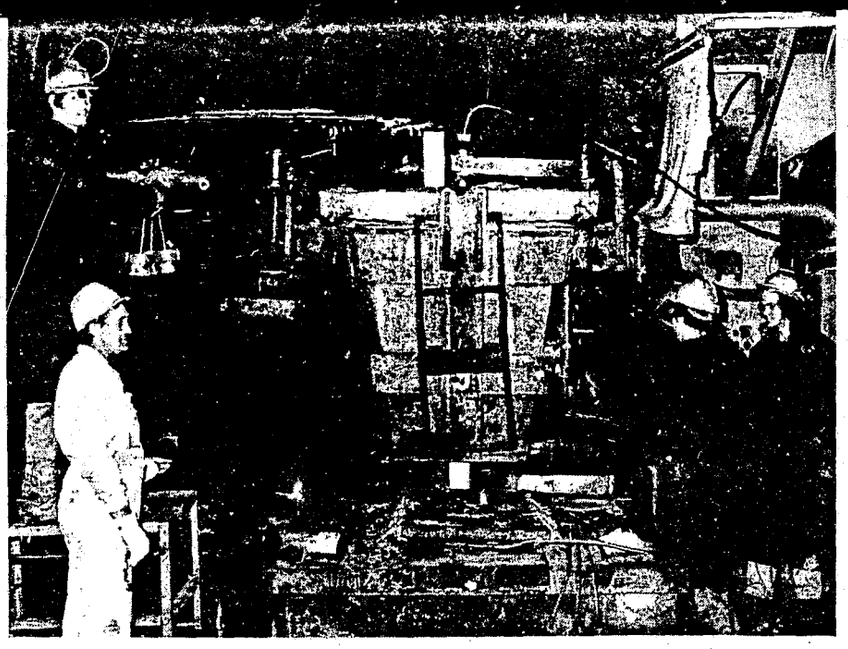
- *Die beste voorlegging. Hier word gelet op die definiëring van standaarde, in ooreenstemming met die ZD-beginsel (meting van foute), en die vertolkbaarheid en netheid van die voorlegging.*

Die voorlegging van die afdeling Staalvervaardiging is eerste geplaas, met dié van Walswerke



Elektriese Boogoonde het die ZD-toekenning vir die beste veld gedek, ontvang. Hier word 'n nuwe elektrodekolom bo-op 'n oond aangelas.

Electric Arc Furnaces received the ZD award for the best field covered. Here, a new electrode column is added on top of a furnace.



Vloeistaal word uit 'n gietpot, deur 'n buis van vuurvaste materiaal, in die verdeeltrog van 'n platbok-stringgietmasjien by die Vanderbijlpark-werke getap. Die seksie Stringgiet en Dienste was die eerste wenner van 'n wisseltrofee vir die beste vordering ingevolge die Zero Defekte-program.

Liquid steel is poured from the ladle, through a refractory tube, into the tundish of a continuous slab casting machine at the Vanderbijlpark Works. The Continuous Casting and Services section was the first winner of a floating trophy under the Zero Defects programme.

(Noord) tweede en Ystervervaardiging en Ingenieurswese s'n derde. Aan mnr. R. Brenkel, Bestuurder, Staalvervaardiging, is 'n sertifikaat oorhandig.

● *Die beste veld gedek. Die beoordelingstandaarde is hier die bepaling van die invloed van 'n fout op die afdeling se produksie, tot watter vlak die foute-meting uitgebrei is en die oorspronklikheid van die standaarde.*

Die Elektriese Boogoonde (met 12 velde gedek) is eerste geplaas, met Plaatwalswerke (Suid) tweede en LD-oonde derde. Mnr. S. B. Kloppers, Superintendent, Elektriese Boogoonde, het 'n sertifikaat ontvang.

● *Die grootste betrokkenheid, oftewel die afdeling met die grootste persentasie persone wat hulself tot die program verbind het. Eerste, met 90 persent, was die afdeling van die Werkekontroleur, en gesamentlik tweede, met 84 persent elk, was Werkeproduksiebeheer, Bykomende Dienste en Werkebedryfsingenieurswese. 'n Sertifikaat is aan mnr. H. B. van der Merwe, Werkekontroleur, oorhandig.*

● *Die beste vordering. Hier word die werklike verbetering beskou wat behaal is in die spesifieke veld, d.w.s. die persentasie verbetering gemeet teen 'n bona fide-ZD-standaard, en die uitwerking wat dit op 'n bestuursprestasiestandaard sal hê.*

Die seksie Stringgiet en Dienste is in hierdie kategorie eerste en tweede geplaas: eerste vir 'n mooi daling in die eerste ses maande vanjaar wat betref die getal werknemers wat sonder verlof afwesig was, en tweede vir 'n afname in die staaluitbrekings op die gietmasjien. Die derde plek is aan Elektriese Boogoonde toegeken vir 'n verbetering in temperatuurbeheer.

Vir die beste vordering word 'n simboliese wisseltrofee toegeken, en die eerste ontvanger was die Superintendent van Stringgiet en Dienste, mnr. N. J. van Wyk. Voortaan sal hierdie trofee elke ses maande toegeken word.

Sedert Desember verlede jaar was daar 'n aansienlike verhoging in die produksiesyfers van die stringgietaanleg. Van Augustus tot November 1978 is gemiddeld 92 482 ton vloeistaal maandeliks gestringgiet, en van Desember 1978 tot Junie 1979 was die gemiddelde maandelikse syfer 115 500 ton . . . 'n verhoging dus van gemiddeld sowat 23 000 ton.

Daar word bereken dat elke ton vloeistaal wat gestringgiet word, 'n besparing van nagenoeg R15 meebring, deurdat die walsing van gietblokke tot platblokke uitgeskakel word.

Hoewel die verbeterings by die stringgietaanleg aan verskillende faktore toegeskryf kan word, word aanvaar dat die toepassing van die ZD-program ongetwyfeld 'n rol gespeel het.

Die Vanderbijlpark-werke begin reeds in 'n vroeë stadium die vrugte pluk van sy baanbrekerswerk om die program in te stel. Al die partye wat betrokke is, moet baat by die suksesvolle funksionering van die program:

* Vir die werknemer bied dit werksbevrediging en erkenning van sy prestasies.
* Vir die werkgewer bring dit aansienlike besparings mee.
* Die klant kan hoër kwaliteit en betroubaarheid in die eindproduk verwag.

Briefly

THE ZERO DEFECTS (ZD) programme launched at Iscor's Vanderbijlpark Works in April 1978, has played a role in the favourable results achieved at this works since the beginning of this year.

The first merit awards under the programmme were recently made for achievements in four fields, namely the best presentation, the best field covered, the largest commitment and the best progress. At the function Mr. F. P. Kotzee, Iscor's Divisional General Manager (Steel Operations), said a break-through had been made in the involvement of employees and that the implementation of the programme had obviously contributed towards the progress made by the works this year and also towards the improvement realized in respect of the quality of products.

He believed that the programme, which was probably unique in South Africa, could advantageously be extended to other Iscor centres.

The ZD programme is a modern management concept aimed at the reduction of defects or faulty work by means of preventive action. Although participation is voluntary, over 75 per cent of the 13 200 White employees at the Vanderbijlpark Works are already involved, and membership is still increasing. The programme is now being implemented for Black employees.

Micro-computer monitors pollution

THE RECENT installation of an 8085 micro-computer in a rather nondescript brick building at the foot of a 50 m high lighting mast, next to the rugby-field at Iscor's Pretoria Trades Training Centre, marks the end of an era. Its predecessor functioned so efficiently that it was the subject of a paper read by an Iscor official at a symposium on automation at the Council for Scientific and Industrial Research. The new micro-computer — like its predecessor — forms part of a system for the reduction of data gathered by way of regular measurement of sulphur dioxide and dust concentrations in the suburbs near the Pretoria Works (see *Iscor News,* September 1979).

The measurement of sulphur dioxide and dust concentrations, two pollutants accepted as indicators of general pollution levels, has been done on a routine basis since 1975. There are various

Mr J. A. van Zyl, Electronics Technician, Automation Systems, Pretoria Works, wiring the new 8085 micro-computer during installation. Mr. Van Zyl built the 8085 completely.

Mnr. J. A. van Zyl, Elektronika-tegnikus, Outomatisasiestelsels, Pretoria-werke, bedraad die nuwe 8085-mikrorekenaar gedurende installering. Mnr. Van Zyl het die 8085 volledig gebou.

methods, both manual and automatic, for determining concentrations of sulphur dioxide. Iscor chose the coulometric method because of its sensitivity, low maintenance and auxiliary requirements and little interference from other substances, particularly ammonia, which is present in concentrations of the same order as sulphur dioxide. The chosen instrument and dust monitor — the latter using the beta ray absorption principle — also measure various meteorological parameters.

The reduction of data from recorder charts, however, was found to be laborious. After scanning the market for data reduction apparatus, it was decided to use in-house expertise on micro-computers. This had the advantages that the cost was much lower, that apparatus could be exactly matched to requirements, that flexibility with a view to the future was provided and that programming and maintenance personnel have had previous experience since the system is in use elsewhere in the works.

The system subsequently commissioned by the works section Automation Systems, was an 8080 micro-computer with electrostatic printer, which had eight analogue input channels connecting the output of the various instruments to the micro-computer, and one digital unit.

The instruments supplied data on the variables of wind speed and direction, sulphur dioxide and dust content in the air, humidity and ambient and differential temperatures at the top and bottom of the lighting mast as compared to those at the middle of the mast. A signal from the dust monitor showing that its output was available, formed a digital input to the micro-computer.

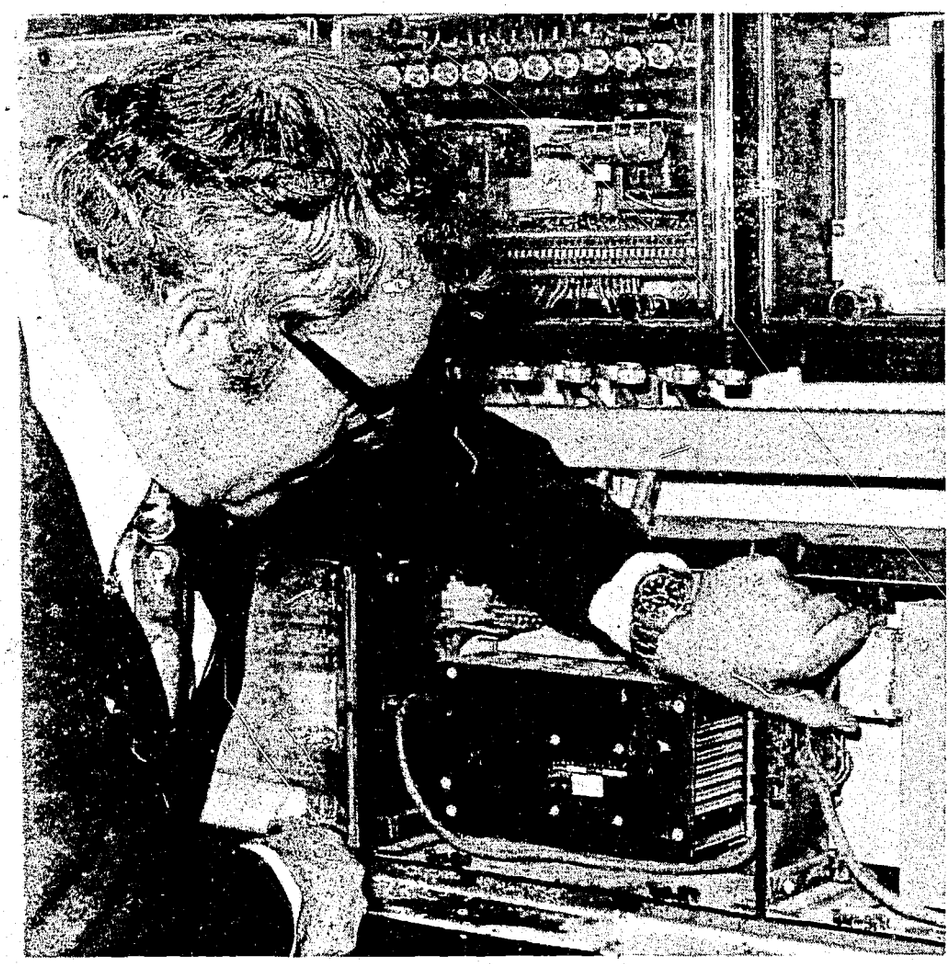
The older micro-computer had a software implemented real-time clock. Logs were produced every three minutes, as well as hourly. The logs were all integrated values, with the integration period being 15 seconds for fast changing variables. The dust figure was integrated by its monitor.

A plug was installed for connecting a portable keyboard — used to update instruments' calibration figures and time and date — and for maintenance purposes.

The programme in the micro-computer was written in Basic for ease of implementation and maintainability. The Basic interpreter was a commercially available one, modified by Iscor personnel for process control situations. The memory in the older computer was 6 000 words of programme storage and 1 000 words of data storage.

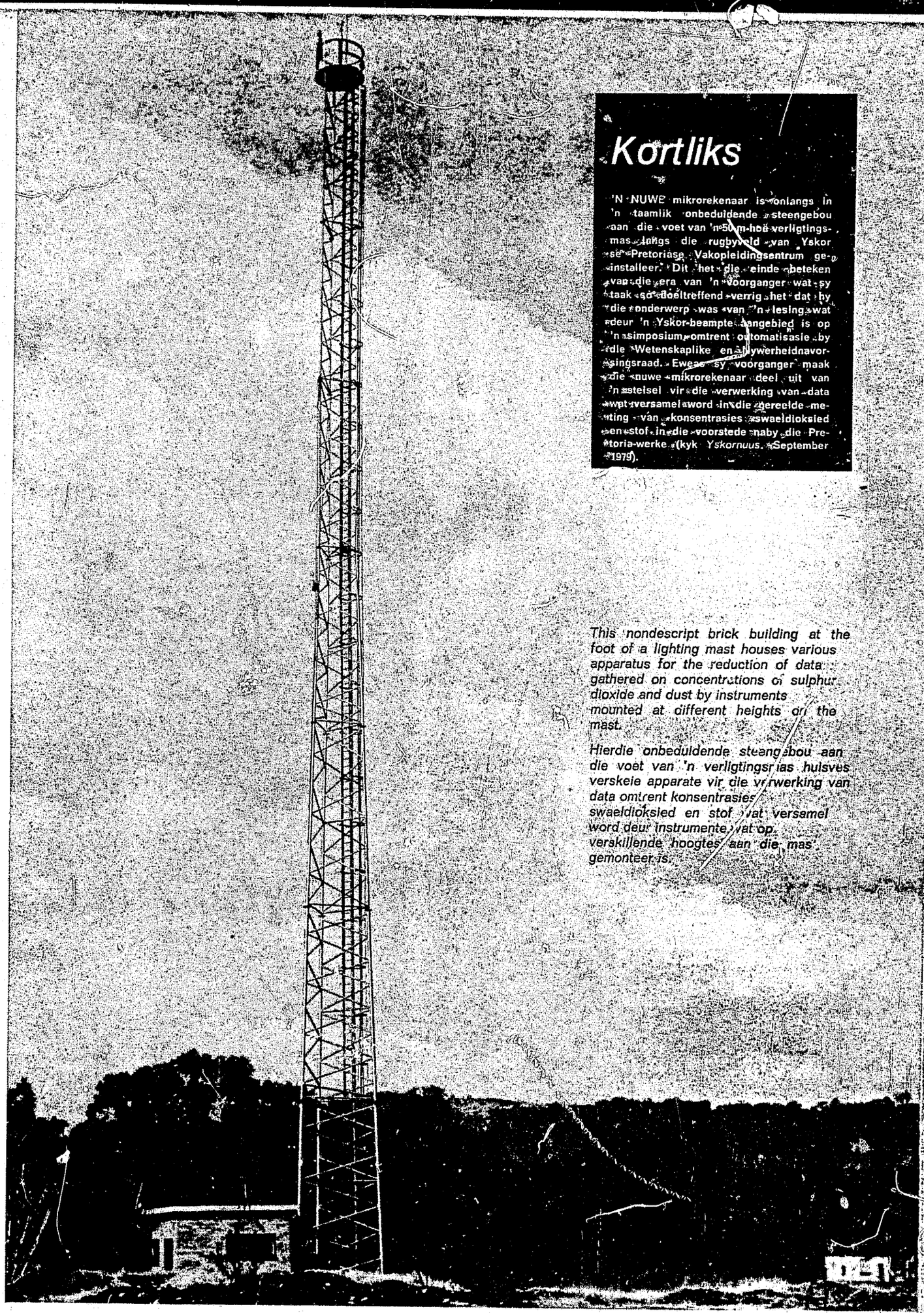
The new 8085 micro-computer forms part of the same system but incorporates a few improvements. Its memory capacity has been increased to 8 000 words and data storage to 2 000 words. The computer has a facility to punch paper tape which is more readily processible by the main computer and results in less time being spent by punch operators when they enter data.

The new micro-computer has an engineering maintenance panel. By means of switches, analogue codes can be read out immediately on a numeric display unit. This obviates the need for maintenance personnel having to use various instruments to determine whether all analogue codes have been read in correctly. The switches can also be applied for running certain routines on the micro-computer to test various functions.



Mr. J. J. Barnard, Technician, Environmental Control and Industrial Hygiene, Pretoria Works, pointing out the first micro-computer which was housed in the building.

Mnr. J. J. Barnard, Tegnikus, Omgewingsbeheer en Bedryfshigiëne, Pretoria-werke, dui die eerste mikrorekenaar wat in die gebou gehuisves was, aan.



Kortliks

'N NUWE mikrorekenaar is onlangs in 'n taamlik onbeduidende steengebou aan die voet van 'n 50 m-hoë verligtingsmas langs die rugbyveld van Yskor se Pretoriase Vakopleidingsentrum geïnstalleer. Dit het die einde beteken van die era van 'n voorganger wat sy taak so doeltreffend verrig het dat hy die onderwerp was van 'n lesing wat deur 'n Yskor-beampte aangebied is op 'n simposium omtrent outomatisasie by die Wetenskaplike en Nywerheidnavorsingsraad. Ewenaar sy voorganger maak die nuwe mikrorekenaar deel uit van 'n stelsel vir die verwerking van data wat versamel word in die gereelde meting van konsentrasies swaeldioksied en stof in die voorstede naby die Pretoria-werke (kyk *Yskornuus*, September 1979).

This nondescript brick building at the foot of a lighting mast houses various apparatus for the reduction of data gathered on concentrations of sulphur dioxide and dust by instruments mounted at different heights on the mast.

Hierdie onbeduidende steengebou aan die voet van 'n verligtingsmas huisves verskeie apparate vir die verwerking van data omtrent konsentrasies swaeldioksied en stof wat versamel word deur instrumente wat op verskillende hoogtes aan die mas gemonteer is.

Om die oorblyfsels van die ystersmeltoond te beskerm, is dit omheen en van 'n grasdak voorsien.

To protect the remains of the iron smelting furnace, they were fenced in and provided with a grass roof.

Primitief, maar nogtans yster

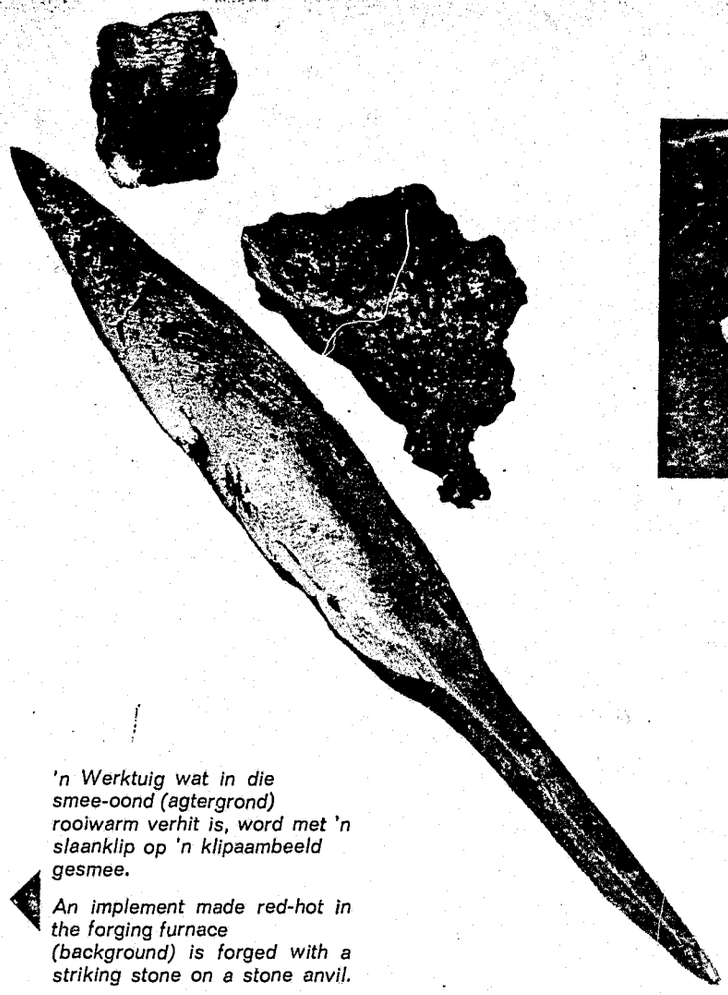
VAN DIE RYKSTE argeologiese terreine uit die Ystertydperk wat nog in Suid-Afrika ontdek is, is dié in die omgewing van Tzaneen, in Noordoos-Transvaal. Hierdie terreine bestaan hoofsaaklik uit oorblyfsels van soutwerke en ystersmelterye uit antieke tye, en opgrawings het interessante voorwerpe opgelewer. Die sowat 50 000 potskerwe wat by die soutwerkterreine opgegrawe is, kon deur kenners in drie duidelike potwerkkulture ingedeel word, waarvan die oudste uit die derde eeu n.C. dateer.

Die laaste Bantoestam wat sout in die gebied ontgin het, was die Tsongas, onder die vroeë Blanke intrekkers as „knopneuse" bekend. Hulle het eers in die huidige Mosambiek gewoon maar moes later oor die Lebomboberge vlug vir 'n groep Zoeloes onder Soshangana, wat langs die ooskus opbeweeg het. Toe die volgelinge van Soshangana, wat vandag as die Shangaans bekend staan, op hul beurt vir die Portugese moes vlug, het ook hulle oorkant die Lebombo in die huidige Transvaal woonplek gaan soek. Vandag bewoon sowel die Tsongas as die Shangaans die tuisland Gazankulu en is daar wedersydse kulturele beïnvloeding by die twee groepe te bespeur.

In die Hans Merensky-natuurreservaat, ongeveer 65 km van Tzaneen af, is 'n ystersmeltoond wat deur vroeë bewoners van die gebied gebruik is, ontdek en deur argeoloë van die Universiteit van die Witwatersrand opgegrawe. 'n Replika daarvan is deur die afdeling Museumdiens van die Provinsiale Administrasie by sy opelugmuseum in die reservaat opgerig. Hierdie museum is in die vorm van 'n tradisionele Tsonga-kraal, volledig met die hutte van 'n opperhoof en sy agt vrouens, beeskraal, bokkraal, hoenderhut en kook- en graanhutte. Net buite die takomheining van die kraal is aan die een kant 'n soutmakery en aan die oorkant die replika van die ystersmeltoond.

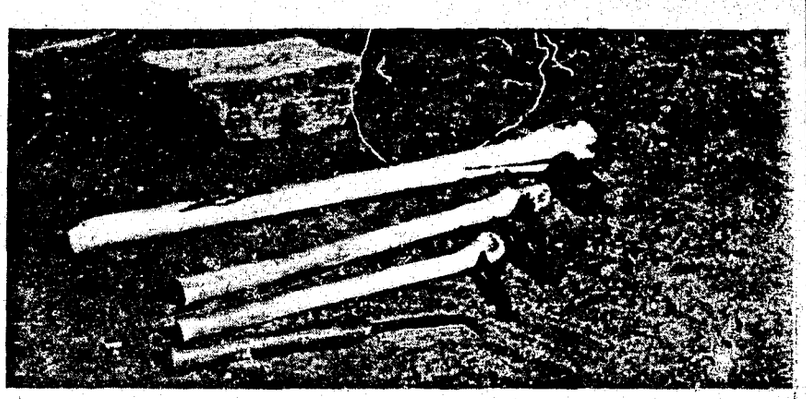
Die smeltoond is van miershoopklei gemaak en bestaan uit 'n komvormige gat, wat die herd van die oond was, met drie vlakkerige sirkelvormige holtes daarom, in elk waarvan 'n blaasbalkblaser gesit het. Uit elke holte loop 'n spleet deur die wand van die herd, waarin 'n kleipyp ingemessel word om die blaaslug in die herd in te voer. Hierdie blaaslug word verskaf deur twee blaasbalke in elke holte — dus ses altesaam — wat van bokvel gemaak is. Elke blaasbalkblaser werk met twee blaasbalke, een in elke hand. As die een afgedruk word, word die ander opgelig om lug in die sak op te trek. Die blaasbalke word dus om die beurt gewerk om 'n ononderbroke stroom lug in die oond in te blaas. Die lug gaan deur waterbokhorings wat reguit gebuig is, tot in die kleipype. Om met die blaasbalke te pomp, is nogal 'n kuns, want met die opwaartse beweging van die hand gaan die velsak oop om lug in te laat en met die afwaartse beweging moet die hand die sak toedruk om die lug deur te pomp.

Voorblad



'n Werktuig wat in die smee-oond (agtergrond) rooiwarm verhit is, word met 'n slaanklip op 'n klipaambeeld gesmee.

An implement made red-hot in the forging furnace (background) is forged with a striking stone on a stone anvil.



Voorbeelde van 'n byl, 'n pik en houtwerkgereedskap soos wat deur die Tsongas voor die koms van die Blanke beskawing gebruik is.

Examples of an axe, a hoe and woodwork tools as used by the Tsonga before the advent of White civilization.

Sulke stukke yster (links bo) word van 'n halfgesmelte „klont" van yster, slak en houtskool afgeslaan en met behulp van 'n smee-oond aan mekaar vasgesmee. Die assegaaipunt is in die Hans Merensky-natuurreservaat as 'n eksperiment van sulke gesmede stukke gemaak. (Foto: Tsongakraal-opelugmuseum.)

Such pieces of iron (above left) are knocked off the half-smelted lump of iron, slag and charcoal and forged together with the aid of a forging furnace. The spear-point was made in the Hans Merensky Nature Reserve from such forged pieces as an experiment. (Photo: Tsongakraal Open Air Museum.)

In 'n gat in die herd word eers die toordokter se „medisyne" geplaas. Die erts, wat tot perskepitgrootte opgebreek is, word in 'n kalbas in die herd geplaas, waarna die oond verder vol houtskool gemaak word. Die houtskool word verkry deur hout van die vaalbos (*Terminalia Serico*) te brand.

Die oond word aangesteek en die drie „operateurs" begin pomp. Om een lading erts uit te smelt, het sowat 18 uur se ononderbroke pompwerk gekos. In die proses styg die temperatuur in die oond tot ongeveer 1 200°C — hoog genoeg om die yster uit die erts uit te smelt, hoewel die metaal blykbaar nooit werklik gevloei het nie. Na die uitsmelting word die oond laat afkoel, die kleipype verwyder en 'n oneweredige poreuse massa van yster, slak en houtskool uitgehaal. Die stukkies yster wat daaraan kleef, word dan afgekap en in 'n afsonderlike smee-oond herverhit, aan mekaar vasgesmee en bewerk tot bruikbare werktuie.

Benewens verskeie tradisionele handwerkkunste wat in die Tsongakraal beoefen word, soos pottebakkery, matvlegwerk en houtsneewerk, is daar 'n voorbeeld van so 'n smee-oond waar lemme vir skoffelpikke en byle, asook ander ystervoorwerpe, gesmee word.

Besoekers aan die museum kan sien hoe die oond ook deur middel van 'n bokvelblaasbalk aangeblaas word totdat die stuk yster wat gesmee moet word, net soos die houtskool, rooiwarm gloei, gereed om met die ronde slaanklip op die klipaambeeld gefatsoeneer te word. So doeltreffend is die primitiewe blaasbalk dat die temperatuur binne 'n halfuur tot meer as 1 000°C kan styg.

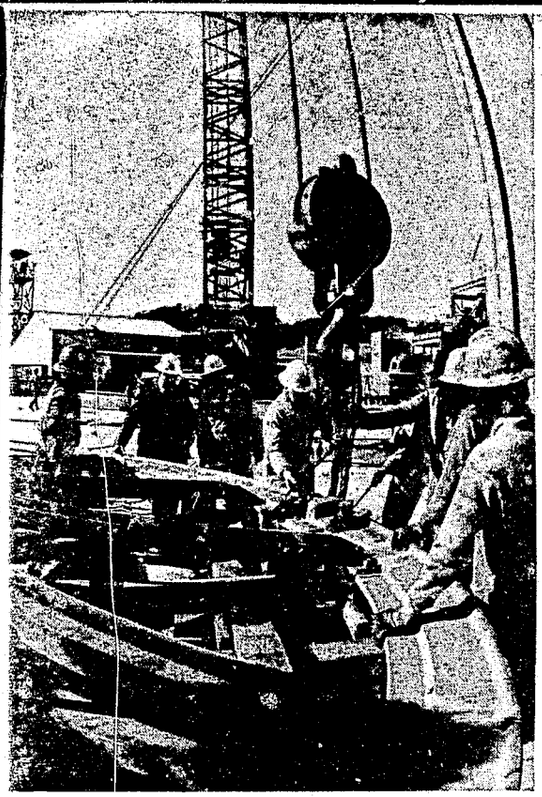
Mnr. J. J. Basson, die kurator van die opelugmuseum, sê dat die erts waarskynlik van Phalaborwa (sowat 50 km daarvandaan soos die kraai vlieg) aangedra is, alhoewel daar ook ystererts in die Swartheuwels daar naby voorkom. Die grootste vraag bly egter hoe hierdie kennis van die smelt van ystererts na die vasteland van Afrika gebring is.

Briefly

IN THE Hans Merensky Nature Reserve, some 65 km beyond Tzaneen, in the north-eastern Transvaal, an iron smelting furnace used by the early inhabitants of the area was discovered. A replica of such a furnace was built by the Museum Service division of the Provincial Administration in its open-air museum in the reserve.

The smelting furnace was made of antheap clay and consisted of a bowl-shaped hole — which was the hearth of the furnace — with three shallow circular hollows around it. In each hollow sat an iron smelter who operated the goatskin bellows to provide the "blast". The air passed along straightened water-buck horns to the clay pipes through the walls of the furnace.

After the witch-doctor's "medicine" had been placed in the hearth, the crushed iron ore was added and the whole furnace filled with charcoal. Next the fire was lit, and after about 18 hours' uninterrupted operation of the bellows, iron was obtained. This was in the form of small pieces chipped from the solidified lump taken from the hearth after cooling. Finally, the bits of iron were reheated in a forging furnace and hammered into tools and implements with the aid of a stone hammer and anvil.



A component of the hoist of a headgear is fixed to the hook of the crane which can hoist a load of 200 tons to a height of 21 m.

'n Onderdeel van die hystuig van 'n skagtoring word vasgemaak aan die haak van die hyskraan wat 'n vrag van 200 ton tot 'n hoogte van 21 m kan hys.

R4 million crane order

One of the two container cranes to the value of R4 million manufactured by Mannesmann Demag at its Boksburg factory. The crane is loading a ship in Cape Town harbour.

Een van die twee houerhyskrane ter waarde van R4-miljoen wat deur Mannesmann Demag by sy Boksburg-fabriek vervaardig is. Die kraan is besig om 'n skip in die Kaapstadse hawe te laai.

TWO giant ship-loading container cranes for the South African Railways and Harbours, valued at R4 million, were recently commissioned at the Cape Town and Durban harbours. Both cranes were designed and manufactured at the Boksburg factory of Mannesmann Demag (Pty) Limited, which was also responsible for the erection and commissioning. Local content of about 90 per cent by mass included Iscor steel products.

Each crane has a capacity of 40 tons at 37,75 m maximum outreach for loading and unloading of both cellular and non-cellular container vessels. Mannesmann Demag container cranes can be engineered to withstand winds of more than 80 m/sec and can have single-lift or twin-lift functions. They can also be equipped with a wide variety of optional features such as list, trim and skew motion, anti-sway, semi-automated load path control and programmable load location devices.

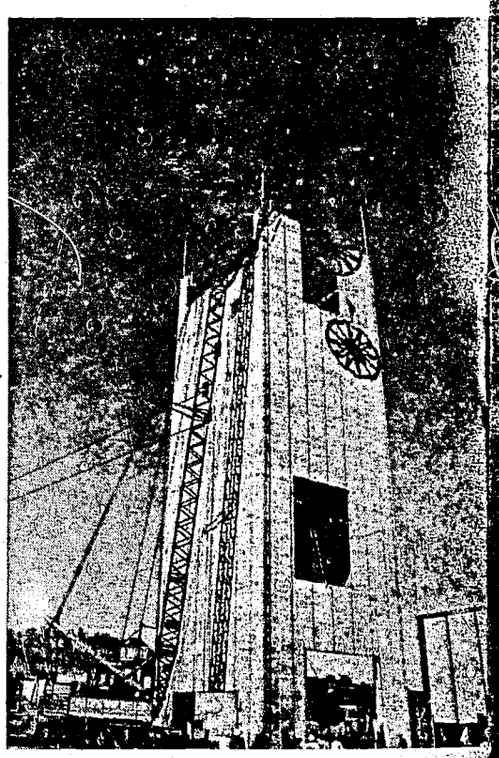
The total number of Mannesmann Demag ship-loading container cranes delivered to and on order for the SAR & H amounts to 14. The first order for this specialized type of harbour crane was placed with Demag in 1975 — for seven container cranes. The Boksburg factory is now playing an important role in the development of a containerization network in South Africa through the provision of equipment for container terminals. The advantages claimed for containerization include less packing time and material, optimum utilization of transport vehicles, rapid transfer from one transport system to another, and less damage and pilferage. This results in faster, safer and cheaper transportation and distribution of imports and exports.

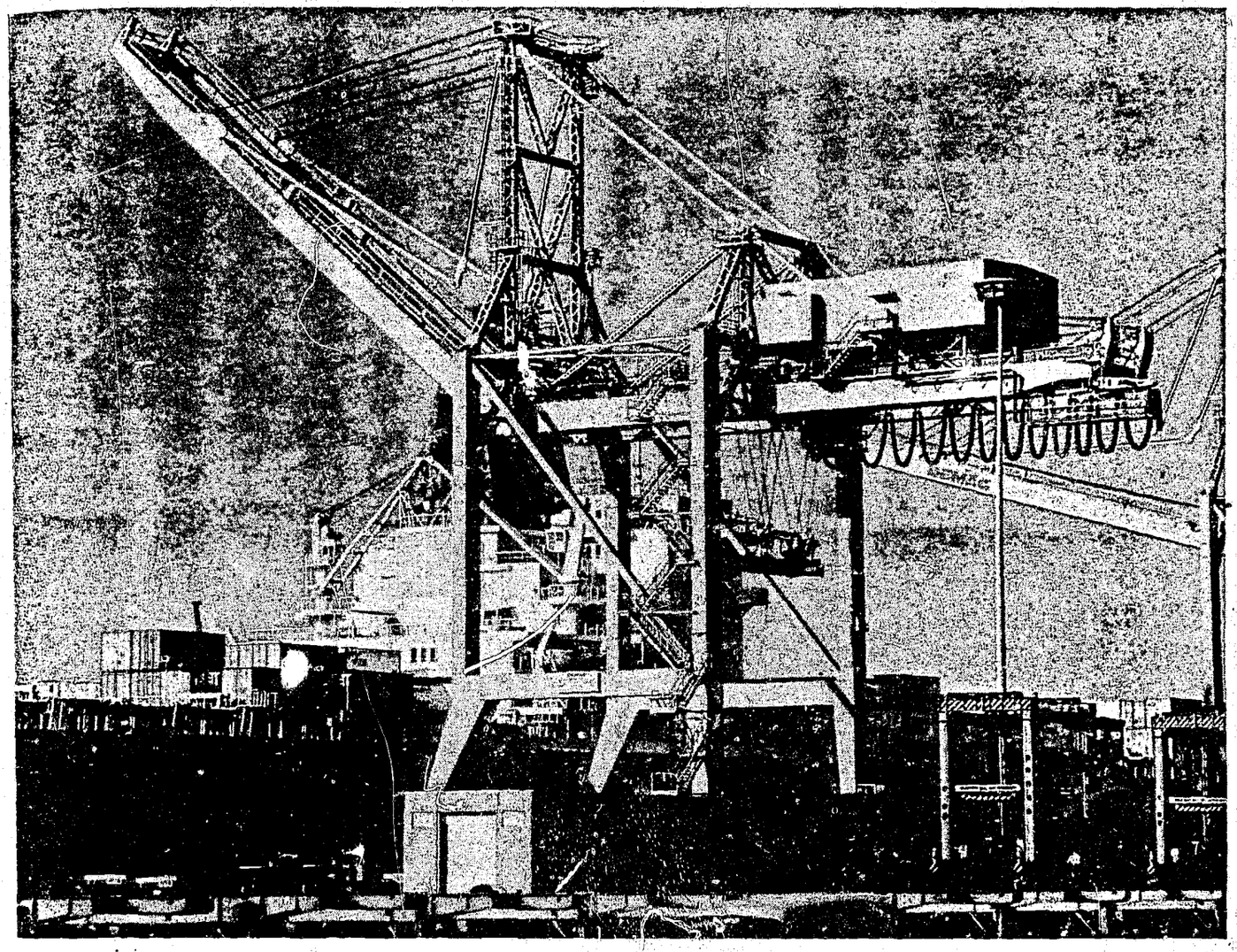
It is estimated that by the end of 1980 the deep-sea handling capacity at the port of Durban will be 450 000 TEU's (twenty-foot equivalent units) a year, which is larger than the present 300 000 TEU's of the UK port of Southampton. The combined capacity of the harbours of Durban, Cape Town and Port Elizabeth is larger than that of Rotterdam — Europe's busiest port with a present capacity of 800 000 TEU's a year.

Another recent contract concluded with the SAR & H is for the supply of two 15-ton capacity wharf cranes, at a cost of R850 000, for installation at the harbour of Saldanha Bay — shipping port for Iscor's iron ore exports. This order brings the total of wharf cranes supplied by Mannesmann Demag for South African har-

A mobile 200-ton Mannesmann Demag crane hoists a heavy component to the top of a headgear of a gold-mine in the Orange Free State.

'n Mobiele Mannesmann Demag-hyskraan van 200 ton hys 'n swaar onderdeel bo-op 'n skagtoring van 'n goudmyn in die Oranje-Vrystaat.





bours to 120. More than 60 have been supplied to harbours in neighbouring countries.

Claimed to be the only one of its kind in Africa, a mobile 200-ton capacity Mannesman Demag crane was recently used for the first time at the Deelkraal gold-mine in the Orange Free State to change the hoist gear of a shaft to permanent winding operation, following completion of shaft equipping. The computerized crane can lift loads of up to 200 tons to a height of 21 m and 14 tons to a height of 84 m above ground level. The crane operator dials the load requirements on the built-in computer, which then calculates all maximum stresses and strains on the particular configuration of jib and boom being used. The computer activates a mechanism which automatically locks the hydraulic lifting winches if the load exceeds the safe maximum limit.

In South Africa, Demag is best known as a designer and manufacturer of cranes for harbours and various industrial activities. It has supplied more than 3 000 cranes of all types in the 50 years of its operations in South Africa. In addition, it has also supplied a variety of other equipment in the form of large centrifugal compressors, tunnelling machines, hoists and excavators. The Boksburg plant is allied to 17 Demag plants in West Germany and 14 in other countries. Experience and technological skills developed world-wide over 150 years, and extensive research and development, have established the organization as one of the world leaders in the field of mechanical engineering, claims Demag.

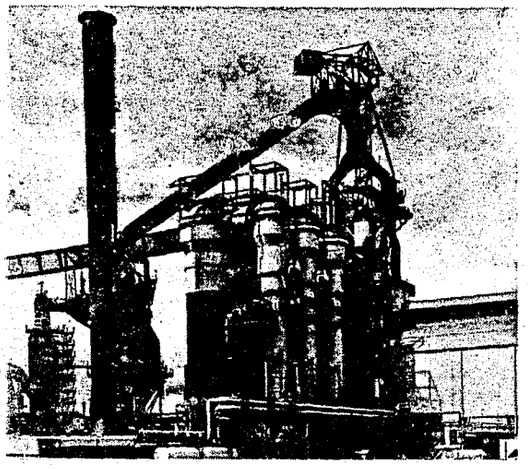
Kortliks

TWEE GROOT houerhyskrane ter waarde van R4-miljoen is onlangs by die hawens van Kaapstad en Durban deur Mannesmann Demag (Edms) Beperk opgerig. Die hyskrane is in die onderneming se Boksburg-fabriek ontwerp en vervaardig, en die plaaslike inhoud is 90 persent volgens massa. Sedert 1975 is reeds 14 houerhyskrane deur die Suid-Afrikaanse Spoorweë en Hawens by Mannesmann Demag bestel. Onlangs is ook twee kaaihyskrane van 15 ton, ter waarde van R650 000, aan die SAS & H vir gebruik by Saldanhabaai gelewer.

Tydens sy werksaamhede van 50 jaar in Suid-Afrika het Demag meer as 3 000 hyskrane aan hawens en nywerhede verskaf. Die firma is deel van 'n wêreldwye onderneming met ervaring en kundigheid wat oor 150 jaar opgebou is.

TWEEDE ARTIKEL IN REEKS

Beter begrip gevorm



Toetse is gedoen om die doeltreffendheid van hoogoond N5 se lugbesoedelingsbeheer-toerusting te bepaal.

Tests have been carried out to determine the efficiency of blast furnace N5's air pollution control equipment.

DIE VERSTREKKING van inligting aan belanghebbende instansies óp grond van jaarverslae omtrent gereelde lugbesoedelingsmetings om en in die Noord- en Suidwerke op Newcastle het gelei tot die vorming van 'n beter begrip van Yskor met betrekking tot lugbesoedeling in hierdie omgewing. 'n Vergelyking van besoedelingsvlakke by Newcastle met dié by groot Suid-Afrikaanse stede toon dat die eersgenoemdes heelwat laer is as die laagste lugbesoedelende konsentrasies wat in die stede gemeet is.

Metings van swaeldioksied-konsentrasies in en om Newcastle-dorp is aanvanklik gedoen met 'n apparaat en volgens 'n metode wat in die Wetenskaplike en Nywerheidnavorsingsraad (WNNR) se spesiale verslag FISIO beskryf is. Hierdie metode berus op 'n reaksie tussen swaeldioksied in die atmosfeer en waterstofperoksied in monsters.

Na die aankoop van 'n swaeldioksied-analiseerder word swaeldioksied-konsentrasies met groter resolusie gemeet. Met die oorspronklike apparaat is gemiddelde swaeldioksied - konsentrasies slegs op 'n grondslag van 24 uur bekombaar. Die analiseerder is in staat om konsentrasies sowel deurlopend te meet as uurliks te bepaal. Met dié apparaat is dit ook moontlik om vas te stel wanneer die hoogste neerslag voorkom — gedurende die dag of nag of tydens die winter of somer. Konsentrasies kan ook bepaal word in die teenwoordigheid van inversielae gedurende die winter teenoor toestande in die somer wanneer geen inversies voorkom nie.

Opnames van rook en stof in die Newcastle-gebied word gedoen met 'n apparaat wat in die WNNR se verslag bekend as SMOG-3 beskryf is. Met behulp van hierdie apparaat word 'n gemete volume lug gesuig deur 'n wit filtreerpapier waarvan die ligtransmissie vooraf bepaal is. Rook,

Een van die wit filtreerpapiere wat saam met die SMOG-3-apparaat gebruik word vir opnames van rook en stof in die Newcastle-gebied.

One of the white filter papers used together with the SMOG 3 apparatus to monitor smoke and dust in the Newcastle area.

Briefly

THE PRESENTATION of information based on annual reports on air pollution measurements around and in the Newcastle Works to interested bodies has led to a better understanding of Iscor with regard to air pollution in this vicinity.

Regular measurements are taken of sulphur dioxide concentrations, smoke and dust. Meteorological monitoring of maximum and minimum temperatures, rainfall and evaporation has been carried out in the North Works.

The results of tests to determine the efficiency of air pollution control equipment, indicated satisfactory performance.

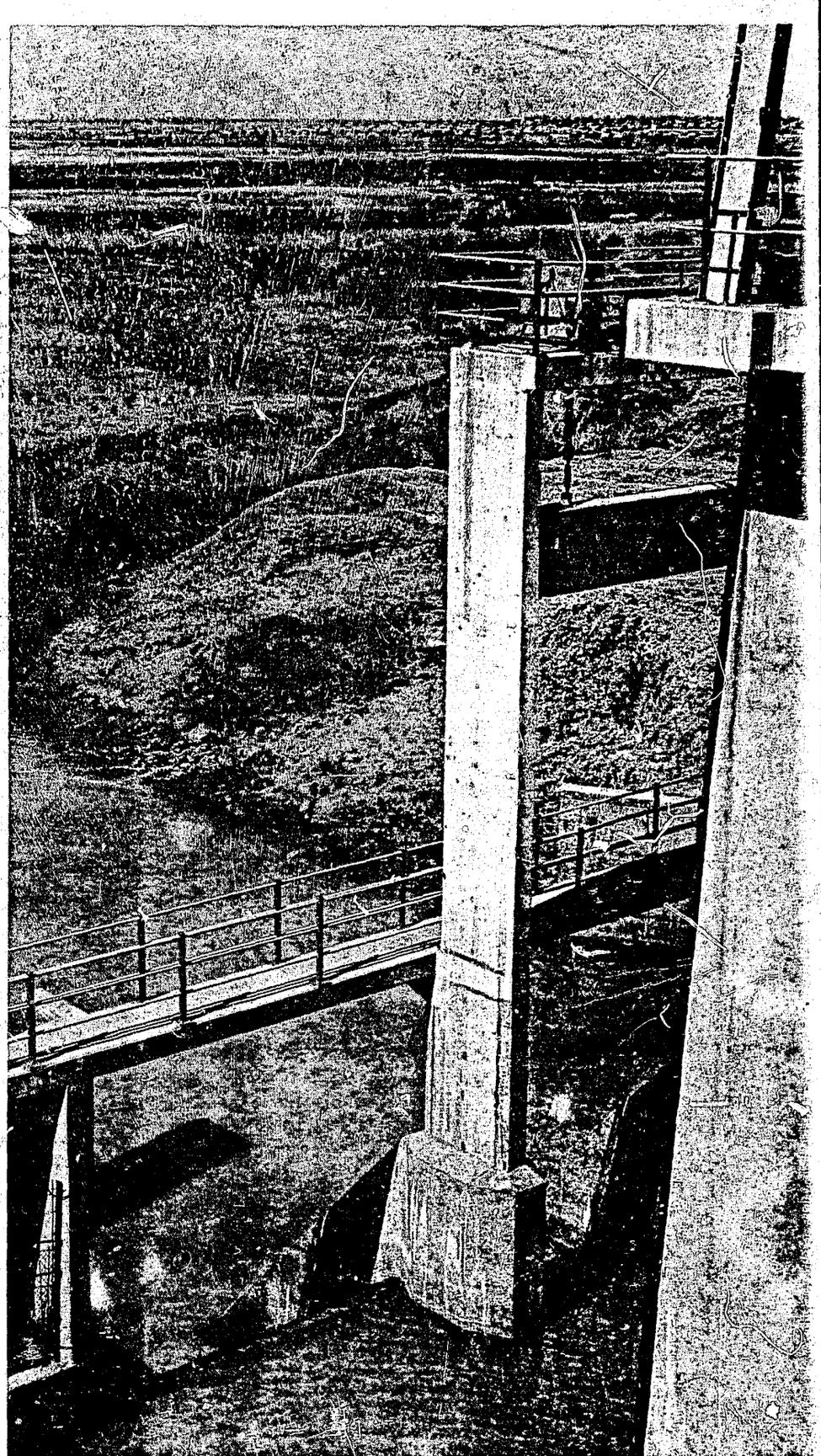
roet en ander fyn deeltjies wat in die lugstroom teenwoordig is, word op die filtreerpapier versamel en veroorsaak kolle met verskillende grade van donkerheid. Nadat 'n monster geneem is, word die ligtransmissie van die filtreerpapier met die neerslag daarop weer gemeet. Die besoedelingsyfer „S", wat die besoedelingspotensiaal van die lug voorstel, word uit die twee ligtransmissiewaardes bereken. Die konsentrasie van rook en roet word verkry deur „S" te deel deur die volume lug wat deur die filtreerpapier gesuig is.

Die opnamepunte vir swaeldioksied-konsentrasies en rook en stof is by die Ngaganerivier-pompstasie, Arborpark, Jordaanstraat, Ncandupark, Grafietlaan en Groef- en Amielweg. Die monsternemings vir swaeldioksied by hierdie opnamepunte word daagliks gedoen, met uitsondering van naweke en openbare vakansiedae.

Weerkundige opnames van maksimum en minimum temperature, reënval en verdamping is in die Noordwerke gedoen en tot maandelikse gemiddeldes verwerk.

Berekening van swaeluitlate in die Suid- en Noordwerke geskied op 'n gereelde maandelikse grondslag. In die Suidwerke word berekenings ook gedoen van sowel swaelemissies in kooksoondgas as bykomende uitlate wanneer olie en teer in ketels verbrand word. Sowel die swaelemissies van die kooksoonde as bykomende uitlate by die knuppelwalsery en ketels word in die Noordwerke bereken wanneer verbranding van olie of teer geskied. Opnames van koolstofmonoksied wat onverbrand in die Suidwerke afgebloei word, vind ook plaas.

Toetse om die doeltreffendheid van lugbesoedelingsbeheertoerusting the bepaal, het bevredigende resultate opgelewer. Hierdie toetse is by hoogoonde N2, N3 en N4 en by die kooksoonde en stoomketels in die Suidwerke gedoen. In die Noordwerke is lugbesoedelingstoerusting getoets by hoogoond N5, die basiese suurstofoonde, die sinteraanleg, die kooksoonde en die fenol- en swaelsuuraanlegte.



'n Toneel by die Ngaganerivier-pompstasie waar swaeldioksied-konsentrasies en rook en stof gereeld gemeet word.

A scene at the Ngagane River pump station where sulphur dioxide concentrations and smoke and dust are regularly measured.

Wyle mnr. Louis Paul Andrag.

The late Mr. Louis Paul Andrag.

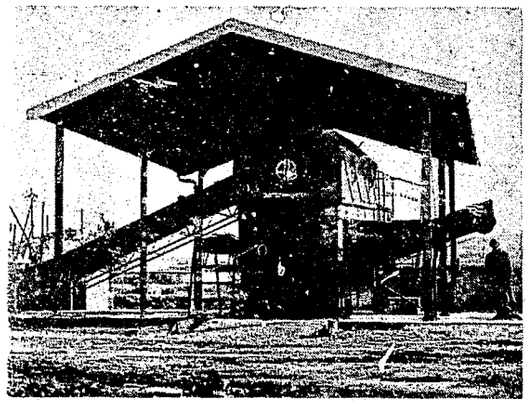
Die Andrag-groep vervaardig 'n wye reeks landbou-implemente. Dié foto toon 'n beitelploeg.

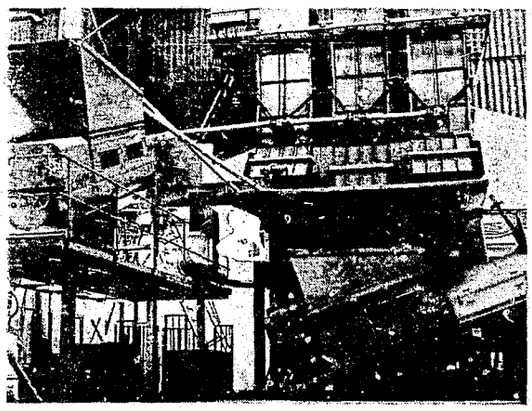
The Andrag group manufactures a wide range of agricultural implements. This photo shows a chisel plough.

'N DRIEKWART EEU VAN VOORUITGANG

'n Komposinstallasie vir die verwerking van vullis wat deur die Andrag-groep vir 'n munisipaliteit vervaardig is.

A compost installation for the processing of refuse, manufactured for a municipality by the Andrag group.





Nog 'n produk van die Andrag-groep is masjinerie vir die wynbedryf. Dié foto toon wynmasjiene wat kragtens lisensie van 'n Franse maatskappy vervaardig word.

product of the Andrag group machinery for the wine industry. This photo shows wine machines manufactured under licence to a French company.

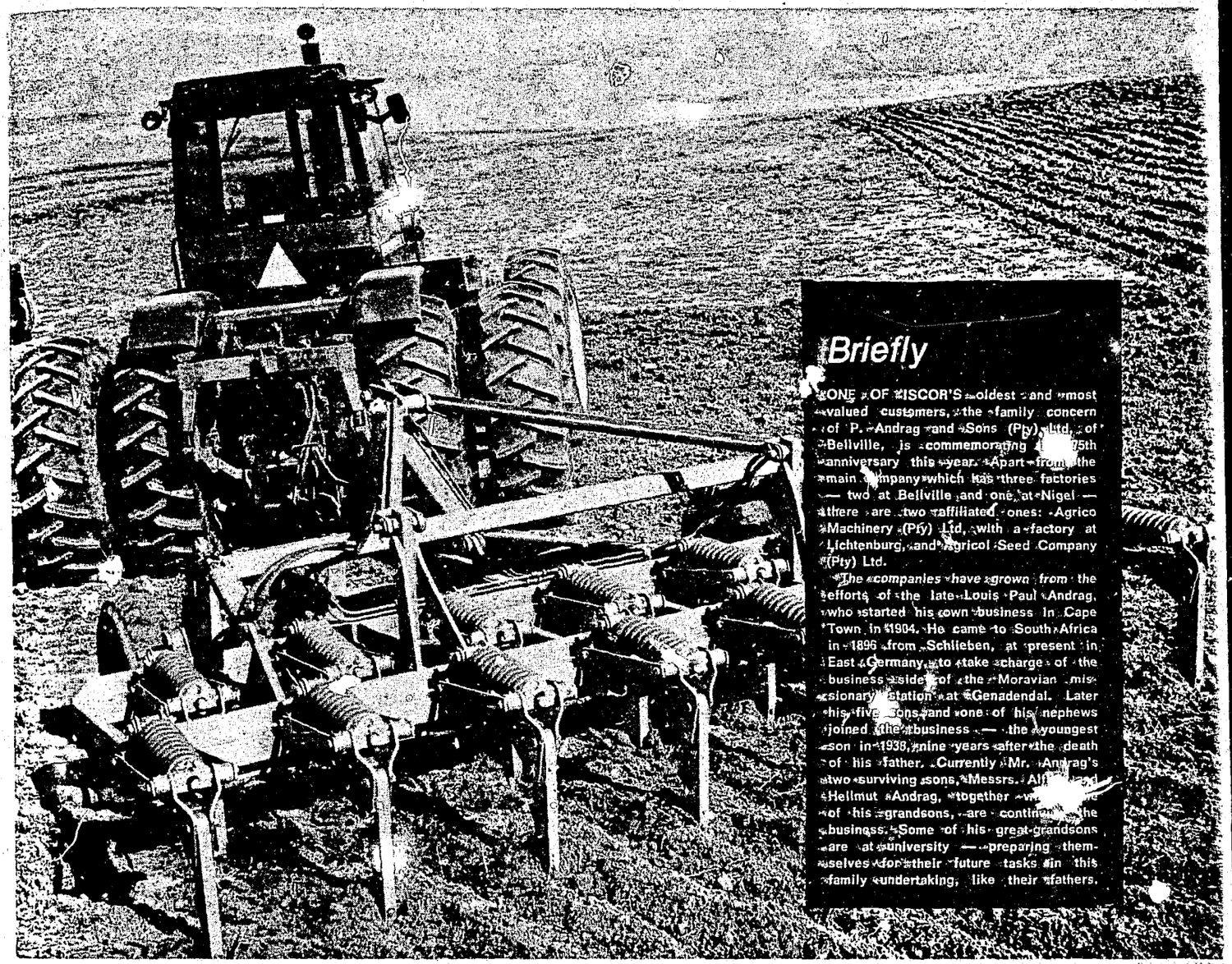
EEN VAN YSKOR se oudste en mees gewaardeerde klante gedenk vanjaar sy 75-jarige bestaan. Dit is die familie-onderneming P. Andrag en Seuns (Edms) Bpk, wat oor verskeie fabrieke en verwante maatskappye beskik. Die groep, waarvan die hoofkantoor in Bellville is, het ook handelstakke in verskeie dele van die land.

Aanvanklik het die groep bekendheid verwerf as verskaffers en vervaardigers van landbou-implemente, maar geleidelik is uitgebrei om ook goedere vir die algemene nywerheid en die boubedryf te vervaardig. Afgesien van die hoofmaatskappy, wat oor drie fabrieke beskik — twee in Bellville en een op Nigel — is daar ook twee ander maatskappye in die groep: Agricol Masjinerie (Edms) Bpk, wat 'n fabriek op Litchtenburg het, en Agricol Saadmaatskappy (Edms) Bpk.

Louis Paul Andrag het in 1896 uit Schlieben, tans is Oos-Duitsland, na Suid-Afrika gekom om die winkel en ander sakebedrywighede van die Morawiese sendingstasie op Genadendal te behartig — 'n taak wat hy, as 'n idealis, as sy besondere sendingroeping gesien het. Hy het groot welslae behaal en in 1904 met die sendinggenootskap ooreengekom dat hy sy eie invoersaak in Kaapstad sou begin, maar waar nodig ook die genootskap se handelsbelange sou behartig. Die gevolge van die Tweede Vryheidsoorlog het sy saak egter nadelig getref en in 1905 het hy met sy vrou en vier seuns na die Saronse sendingstasie verhuis om op uitnodiging die winkel van die Rynse Sendinggenootskap vir sy eie rekening oor te neem.

Hy het die onderneming aansienlik uitgebrei en omdat hy die boere se behoeftes leer ken het, het hy in 1908 met 'n Duitse fabrikant van landbougereedskap, Eduard Schwartz en Seun, onderhandel om implemente volgens sy spesifikasies te vervaardig. Die resultate was uitstekend en die „Caledonia"-ploeg het 'n goeie afset op Caledon en in die Swartland gehad. Op die Roseebank-skou van 1910 het hy die silwermedalje vir die beste uitstalling van landbougereedskap verower.

Die Eerste Wêreldoorlog het 'n tydelike terugslag gebring deurdat die onderneming vir 'n ruk lank



Briefly

ONE OF ISCOR'S oldest and most valued customers, the family concern of P. Andrag and Sons (Pty) Ltd, of Bellville, is commemorating [illegible]5th anniversary this year. Apart from the main company which has three factories — two at Bellville and one at Nigel — there are two affiliated ones: Agrico Machinery (Pty) Ltd, with a factory at Lichtenburg, and Agricol Seed Company (Pty) Ltd.

The companies have grown from the efforts of the late Louis Paul Andrag, who started his own business in Cape Town in 1904. He came to South Africa in 1896 from Schleben, at present in East Germany, to take charge of the business side of the Moravian missionary station at Genadendal. Later his five sons and one of his nephews joined the business — the youngest son in 1938, nine years after the death of his father. Currently Mr. Andrag's two surviving sons, Messrs. Al[illegible] Hellmut Andrag, together with [illegible] of his grandsons, are continuing the business. Some of his great-grandsons are at university — preparing themselves for their future tasks in this family undertaking, like their fathers.

deur die destydse SA Regering as vyandseiendom verklaar is. Mnr. Andrag sr. is tot Saron ingeperk en sy een seun en 'n broerskind wat intussen by die onderneming aangesluit het, is tydelik geïnterneer. In dié tyd rig mnr. Andrag sr. toe 'n smidswinkel op Saron op. 'n Engelse vriend, mnr. Rowland Hill, het staalpantserplate van skepe wat weens die torpedo-oorlog in die dokke afgetakel is, vir hom opgekoop. So is die boere in die graangebiede van Caledon en die Swartland met duisende ploegskare en ander onderdele gehelp.

Na die oorlog het mnr. Andrag beheer oor sy onderneming teruggekry en in 1922 is 'n tak op Gouda (destyds Portervilleweg) begin. In 1926 koop mnr. Andrag sr. in vennootskap met sy broerskind, Max, 'n saak op Moorreesburg en stig P. Andrag en Kie. Hierdie onderneming het verbintenisse met masjienvervaardigers soos Deutz en Lanz, albei van Wes-Duitsland, aangegaan. Dit het onder meer gelei tot die invoer van die Lanz Bulldog-trekkers, wat baie bekend geraak het.

Mettertyd het vier van mnr. Andrag sr. se seuns hulle by hom aangesluit nadat hulle in verskeie rigtings opgelei is. Tot 1928 was die onderneming bekend as Paul Andrag, maar in daardie jaar is 'n vennootskap tussen mnr. Andrag en sy seuns gestig onder die naam P. Andrag en Seuns. Mnr. Andrag sr. is in 1929 op 63-jarige leeftyd oorlede.

In 1932 het P. Andrag en Seuns die eiendom bekend as Breëstraat 68 in Kaapstad gekoop, waarvandaan een van die broers, Walter, bygestaan deur mnr. F. G. Hill — wat na 'n halfeeu nog by die firma is, verkope bevorder en die invoerhandel behartig het.

In 1936 is 'n tak onder toesig van die broers Paul jr., Martin en Alfred in Bellville begin. Die jongste van die vyf broers, mnr. Hellmut Andrag, het na sy opleiding in die ingenieurswese in 1938 by die ander aangesluit.

Tot die uitbreek van die Tweede Wêreldoorlog in 1939 het die firma se grootste invoer nog uit Duitsland gekom, maar mnr. Martin Andrag is kort voor die uitbreek van vyandelikhede na die VSA

Kitskoppelpype uit Yskor-staal. Andrag vervaardig verskillende groottes pyp met 'n verskeidenheid koppelings en toebehore.

Instant coupling pipes from Iscor steel. Andrag manufactures various sizes of pipes with a variety of couplings and fittings.

'n Voorafvervaardigde spiraaltrap wat deur een van die maatskappye in die Andrag-groep uit Yskor-staal vervaardig is.

A prefabricated spiral staircase manufactured from Iscor steel by one of the companies in the Andrag group.

waar 'n agentskap vir John Deere-trekkers en -implemente verkry is. Kort na die uitbreek van die oorlog is mnr. Walter Andrag na Australië waar hy onderdele verkry het vir die honderde Lanz Bulldog-trekkers wat toe in Suid-Afrika in gebruik was. Hy het ook ander agentskappe vir die onderneming verkry.

Hierna is werkwinkels en 'n fabriek — asook 'n nuwe gebou in 1942 — in Modderdamweg, Bellville, opgerig. Na die oorlye in 1945 van mnr. Max Andrag — toe steeds by die onderneming op Moorreesburg — is die maatskapy P. Andrag en Seuns (Edms) Bpk in 1951 geregistreer.

In 1956 is 'n fabriek begin vir die vervaardiging van besproeiingspype op 'n groot stuk grond wat in Stikland, Bellville, aangekoop is. In 1964 is ander fabrieks-werk van Modderdamweg af ook na Stikland verskuif. Dit was die ontstaan van die groep se implemente-fabriek wat tans onder meer ploeë, wynperse en windpompe vervaardig. 'n Tweede fabriek vir die vervaardiging van besproeiingspype is later op Nigel, Transvaal, opgerig, sodat dié maatskappy tans drie fabrieke het.

Gedurende die afgelope 20 jaar het hierdie deel van die groep gespesialiseer in moderne besproeiingsmetodes en baanbrekerswerk op dié gebied verrig. By die hoofkantoor in Bellville — die hoofkantoor is in 1969 van Breëstraat 88, Kaapstad, daarheen verskuif — en die maatskappy se plattelandse takke, verskaf slegs dié deel van die groep werk aan sowat 750 persone.

Na die Tweede Wêreldoorlog wou Wes-Duitse firmas hul uitvoerhandel met Suid-Afrika herwat en die verwante firma, Agrico Masjinerie (Edms) Bpk, waarin die Andrag-familie 'n aandeel van 85 persent besit, is in 1950 gestig om hierdie deel van die besigheid te behartig. In die byna 30 jaar wat sedertdien verloop het, is talle plattelandse takke geopen. Om te voorsien in die Transvaalse en Vrystaatse behoeftes, is 'n fabriek op Lichtenburg gevestig en word daar 'n wye reeks landbougereedskap vervaardig. Hierdie firma het meer as 400 werknemers in diens.

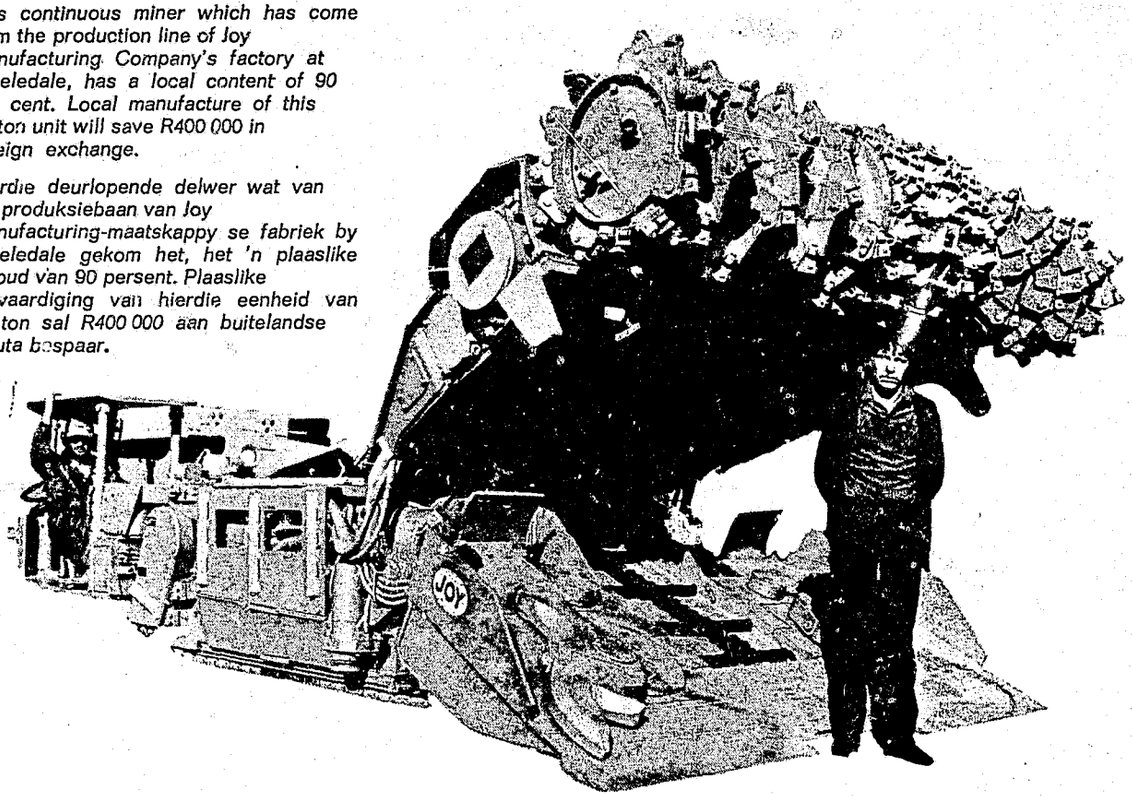
Agricol Saadmaatskappy (Edms) Bpk, die ander verwante maatskappy, spesialiseer in die in- en uitvoer van saad vir weidings en ander landboubehoeftes. Baie voëlsaad en tuingereedskap word ook verkoop. In hierdie familiesaak het mnr. W. C. S. Mostert ook 'n aandeel. Dié onderneming verskaf werk aan meer as 100 persone.

Van die vyf seuns van die stigter is Paul jr., Martin en Walter reeds oorlede nadat elkeen die onderneming langer as 'n halfeeu gedien het. Van die kleinkinders het hul plekke oorgeneem en dien saam met hul oorblywende ooms, mnre. Alfred en Hellmut Andrag, in die firmas. Van die kleinkinders is 'n hele aantal reeds op universiteit. Soos hul vaders bekwaam hulle hul ook goed vir hul toekomstige taak.

First SA-manufactured continuous miner

This continuous miner which has come from the production line of Joy Manufacturing Company's factory at Steeledale, has a local content of 90 per cent. Local manufacture of this 45-ton unit will save R400 000 in foreign exchange.

Hierdie deurlopende delwer wat van die produksiebaan van Joy Manufacturing-maatskappy se fabriek by Steeledale gekom het, het 'n plaaslike inhoud van 90 persent. Plaaslike vervaardiging van hierdie eenheid van 45 ton sal R400 000 aan buitelandse valuta bespaar.



WHAT IS CLAIMED to be the first locally manufactured continuous miner recently came off the production line at the Steeledale factory of Joy Manufacturing Company (Africa) (Pty) Ltd. Local content is approximately 90 per cent by mass and consists mainly of Iscor steel. The 45-ton machine costs about R400 000.

In addition to saving foreign currency, local production of this coal mining equipment will reduce the Republic's dependency on imports — an important factor as coal supplants oil as an energy source and in view of the threat of trade embargoes.

The local production of this unit began two years ago when the growing value of coal in the energy crisis prompted Joy Manufacturing to start metricating and modifying the then imported Joy 12CM6 to suit the more rugged mining conditions encountered in South Africa. Earlier this year an imported Joy unit established a world record by mining 91 330 tons of coal in 73 shifts at the South Witbank coal-mine.

The South African-made miner is due to undergo extensive tests before starting full-scale mining operations. At the Joy factory three more continuous miners are in varying stages of production and will be completed during the following year. Joy is aiming at increasing local content from the present 65 per cent, by value, to over 75 per cent during the next 12 months, as part of its ongoing local manufacturing programme.

Kortliks

DIE EERSTE plaaslik vervaardigde deurlopende delwer is onlangs deur die Steeledale-fabriek van Joy Manufacturing-maatskappy (Afrika) (Edms) Bpk gelewer. Die eenheid kos R400 000 en het 'n plaaslike inhoud van 90 persent volgens massa. Nog drie delwers word tans vervaardig en sal in die loop van die komende jaar voltooi word. Beplanning vir plaaslike produksie het slegs twee jaar gelede begin en het sy oorsprong gehad in die toenemende belang van steenkool as gevolg van die oliekrisis.

Iscor entertains customers

STEEL price increases would be more regular and less inflationary in future, said Mr. P. A. Olivier, Divisional General Manager (Steel Marketing), when he addressed a gathering of industrialists and other steel users who were entertained by Iscor at the annual customers' day held recently at the Zwartkop Country Club.

The Corporation had exported almost two million tons of steel, or 35 per cent of its production, over 12 months. He appealed to industrialists to expand export markets for manufactured goods, as added value of manufactured steel products was on average about two-and-a-half times the value of the primary product.

Dr. J. P. Kearney, a director of Iscor, presented the prizes to the winners and runners-up of golf, bowls and tennis competitions held during the morning.

A smiling Mr. H. Maidl, of Wire Enterprises (Pty) Ltd, winner of the tennis tournament. His partner was Mr. B. Bletcher, of Furnsteel (Pty) Ltd.

'n Glimlaggende mnr. H. Maidl, van Wire Enterprises (Edms) Bpk, wenner van die tennistoernooi. Sy maat was mnr. B. Bletcher, van Furnsteel (Edms) Bpk.

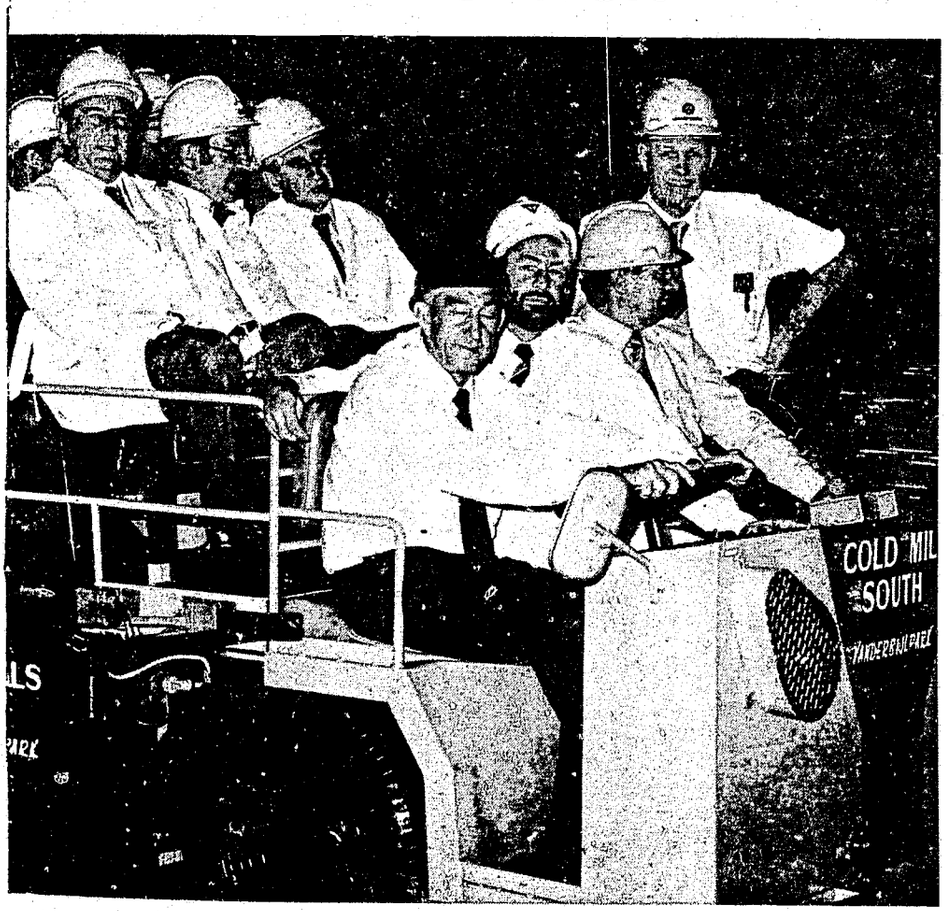
The team which won the bowls competition. Appearing from l. to r. are Messrs. G. Midlane, Dorman Long Vanderbijl Corporation Limited, A. T. Robson, Iscor, L. Klotz, African Gate and Fence Works Limited, and I. Fredericks, Afrox Limited.

Die span wat die rolbalkompetisie gewen het. V. l. n. r. verskyn mnre. G. Midlane, Dorman Long Vanderbijl Korporasie Beperk, A. T. Robson, Yskor, L. Klotz, African Gate and Fence Works Beperk, en I. Fredericks, Afrox Beperk.

Winners of the golf competition decided during the Iscor customers' day at the Zwartkop Country Club. Appearing from l. to r. are Messrs. R. G. van Huyssteen, Iscor, A. Finkelstein, Wolcut Steel (Pty) Ltd, Dr. J. P. Gearney, a director of Iscor, who presented the prizes, Messrs. C. G. Coull, Raymond Vice Steel Company (Pty) Ltd, and J. Thackwray, SAF Welding Products (Pty) Ltd.

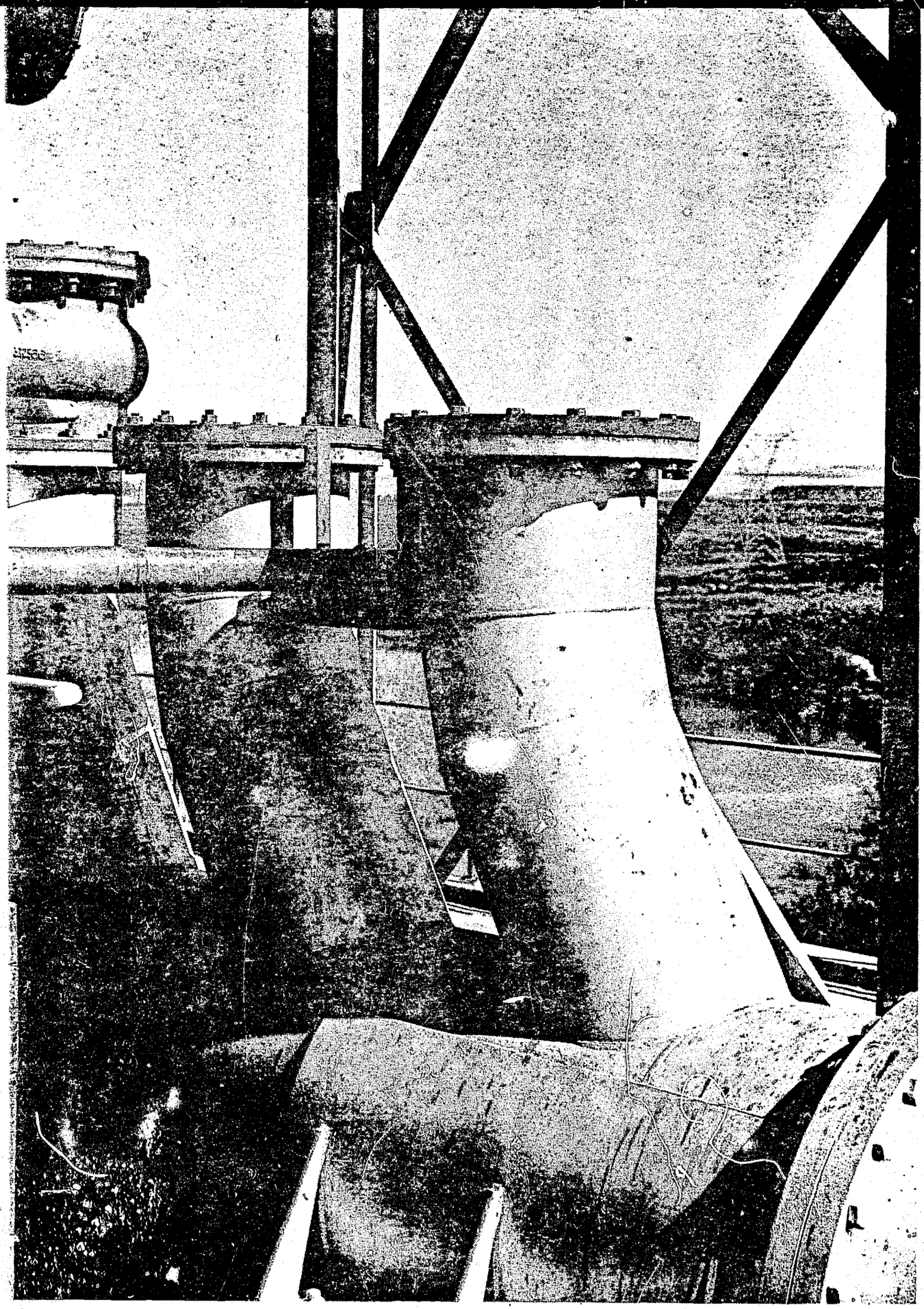
Wenners van die gholfkompetisie wat tydens die Yskor-klantedag by die Zwartkop-buiteklub beslis is. V. l. n. r. verskyn mnre. R. G van Huyssteen, Yskor, A. Finkelstein, Wolcut Steel (Edms) Bpk, dr. J. P. Kearney, 'n direkteur van Yskor, wat die pryse oorhandig het, mnre. C. G. Coull, Raymond Vice Steel-maatskappy (Edms) Bpk, en J. Thackwray, SAF Welding Products (Edms) Bpk.

Minister's visit



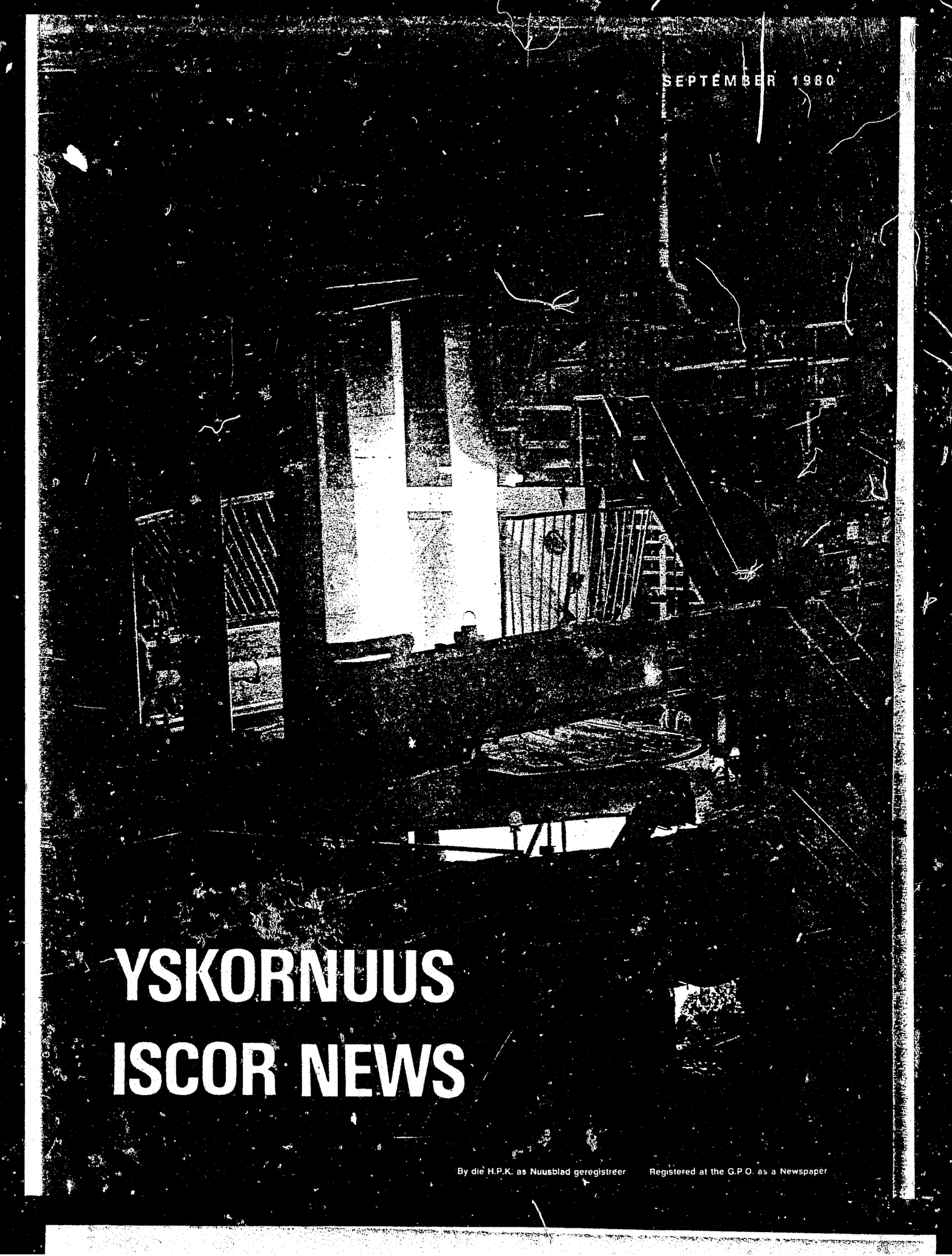
When the Minister of Finance, Sen. O. P. F. Horwood, recently visited Iscor's Vanderbijlpark Works, he and other guests were taken through the massive cold mills complex of the South Works on a rather unusual vehicle . . . a battery-operated mobile crane which had been converted into an open mini-bus by the Maintenance section. Sen. Horwood is seen here on the left in the row behind the driver. Seated next to him are Mr. J. G. Riddell, General Works Manager, Vanderbijlpark, and Dr. T. F. Muller (right), Chairman of Iscor.

Toe die Minister van Finansies, sen. O. P. F. Horwood, onlangs die Yskor-werke op Vanderbijlpark besoek het, is hy en ander gaste deur die massiewe koudwalserykompleks van die Suidwerke geneem met 'n bra buitengewone voertuig . . . 'n battery-aangedrewe mobiele hyskraan wat deur die Instandhoudingseksie tot 'n oop mini-bus omgebou is. Sen. Horwood verskyn hier links in die ry agter die drywer. Langs hom sit mnr. J. G. Riddell, Hoofwerkebestuurder, Vanderbijlpark, en dr. T. F. Muller (regs), Voorsitter van Yskor.



Pump station.

Gedruk deur Perskor, Doornfontein, Johannesburg



SEPTEMBER 1980

YSKORNUUS
ISCOR NEWS

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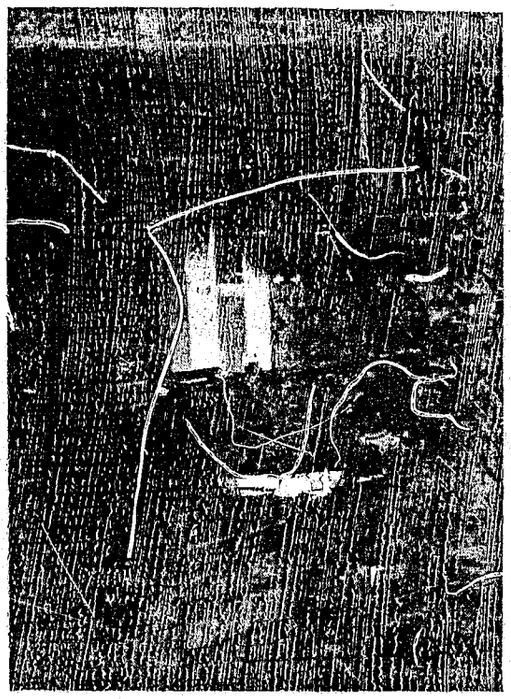

Voorblad

Met die elektrodes gelig, is een van die elektriese boogoonde in die Yskor-werke op Vanderbijlpark gereed vir die laai van skrot.
(Kyk bl. 1-4.)

Cover

With the electrodes raised, one of the electric arc furnaces at Iscor's Vanderbijlpark Works is ready for scrap charging.
(See pages 1-4.)

YSKORNUUS
ISCOR NEWS

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DIE TYDSKRIF VAN DIE SUID-AFRIKAANSE YSTER EN STAAL INDUSTRIËLE KORPORASIE, BEPERK

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Hoër produksie teen laer koste

DIE ONLANGSE oorskakeling van die drie elektriese boogoonde by die Yskor-werke op Vanderbijlpark na 'n waterkoelingstelsel het hoër produksie teen laer bedryfskoste moontlik gemaak.

Die hoofkontrakteur vir die voorsiening en installering van nuwe oonde, met verdeelbare oonddoppe en waterverkoelde symure en dakke, insluitende 'n volledige vierde oond as bystandseenheid, was Didier (SA) (Edms) Beperk. Die Korf-Fuchs-panele wat geïnstalleer is, word reeds met groot welslae in elektriese boogoonde in etlike oorsese lande gebruik. Die panele bedek 70 persent van die oonde se symure en 85 persent van die dakke.

Die koste van die oorskakeling beloop nagenoeg R2-miljoen, maar die verwagting is dat hierdie bedrag reeds teen Januarie 1981, minder as nege maande na die inbedryfstelling van die eerste nuwe oond, verhaal sal wees as gevolg van aansienlik verhoogde produksie en 'n skerp daling in bedryfskoste, veral wat die verbruik van vuurvaste stene en elektrodes betref.

Aanduidings is dat die aanleg se produksie, wat voor die oorskakeling op die peil van 100 000 ton per maand was, tot 110 000 ton per maand sal verbeter, en 'n moontlike verkorting van smelttye kan produksie in 'n later stadium nog verder verhoog. Gedurende Julie is 'n nuwe maandrekord van 111 050 gietblokton daargestel.

Hoewel waterkoelingstelsels lank reeds by staalwerke in oonde, veral hoogoonde, gebruik word, is die aanwending van waterverkoelde panele in elektriese boogoonde 'n betreklik nuwe ontwikkeling.

By die Vanderbijlpark-werke is sowat drie jaar gelede die eerste keer van waterkoeling in die boogoonde gebruik gemaak nadat Yskoriane by soortgelyke aanlegte in die buiteland kennis van die nuwe ontwikkeling opgedoen het. Gietysterblokke wat by die werke vervaardig is, is aanvanklik in een oond en later in al drie oonde geïnstalleer. Die beperkte toepassing van waterkoeling het 'n aansienlike vermindering in die verbruik van vuurvaste stene en 'n verlenging van kampanjelewens tussen

In die nuwe beheerkamer van een van die elektriese boogoonde verskyn, van links: mnre. B. H. Strohmeier, Assistent-Superintendent van die aanleg, K. Werner, van Korf-Fuchs, en G. Fuchs, Besturende Direkteur van Korf-Fuchs en ontwerper van die waterkoelingstelsel.

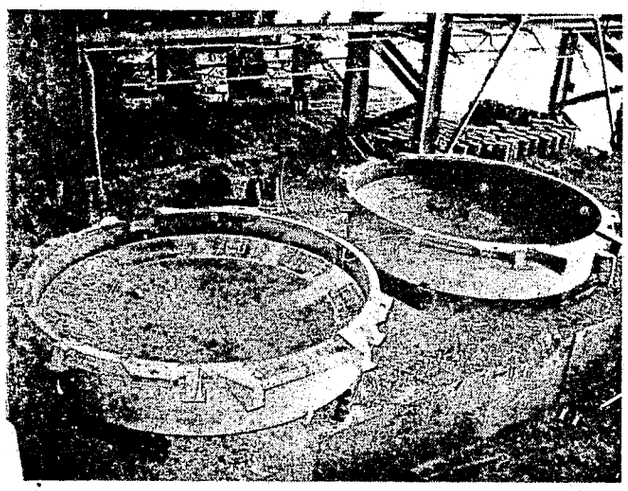
Appearing in the new control room of one of the electric arc furnaces are, from the left: Messrs. B. H. Strohmeier, Assistant Superintendent of the plant, K. Werner, of Korf-Fuchs, and G. Fuchs, Managing Director of Korf-Fuchs and designer of the water-cooling system.

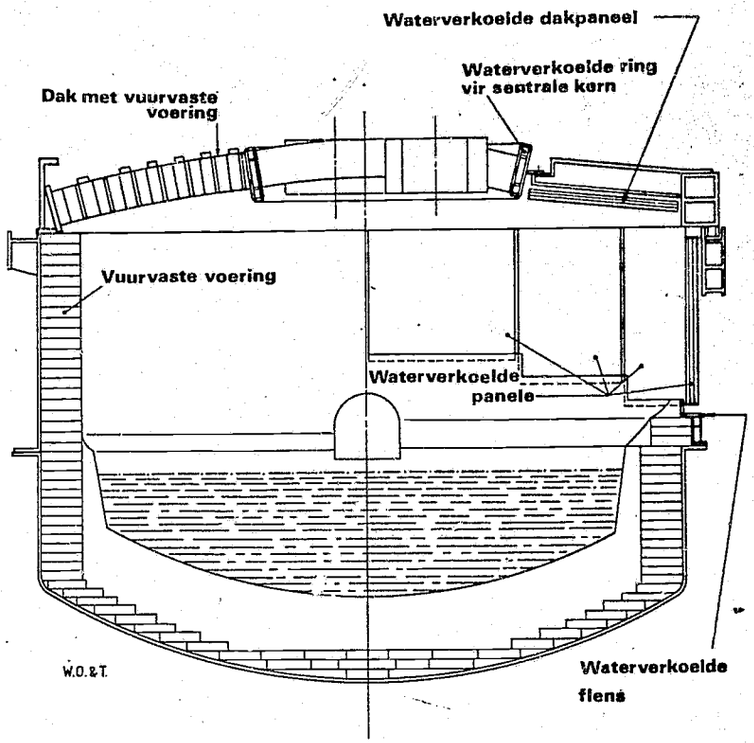
'n Waterverkoelde dak vir een van die nuwe oonde. Die opening in die middel is vir die elektrodes en dié regs vir die afgasstelsel.

A water-cooled roof for one of the new furnaces. The opening in the centre is for the electrodes and that on the right for the off-gas system.

Twee nuwe herde, voordat hulle met vuurvaste stene en stampmateriaal uitgevoer is.

Two new hearths, prior to being lined with refractories and ramming material.





'n Skematiese diagram van 'n ou elektriese boogoond (linkerhelfte), met volle symuur- en dakbekleding van vuurvaste materiaal, en 'n nuwe oond (regterhelfte), met waterverkoelde panele in die symure en dak.

A schematic diagram of an old electric arc furnace (left half), with full refractory cladding of the sidewalls and roof, and a new furnace (right half), with water-cooled panels in the sidewalls and roof.

oondherstellings meegebring, en was hoofsaaklik verantwoordelik vir die aanleg se verhoogde produksie die afgelope paar jaar.

Die installering van die gietysterblokke was moeilik en hul lewensduur betreklik kort, maar die welslae wat daarmee behaal is, het gelei tot 'n besluit om oor te skakel na 'n volledige waterkoelingstelsel, met gebruikmaking van staalpanele, waarvan die doeltreffendheid reeds by oorsese staalwerke bewys is, ten einde die optimale voordele van die stelsel te verseker. Om staantyd vir herstelwerk te verkort, is besluit dat die nuwe oonde verdeelbare doppe moes hê.

In September 1979 is 'n bestelling by Didier (SA) geplaas vir die voorsiening van vier oonde met verdeelbare doppe en toegerus met 'n waterverkoelde „veiligheidstelsel". Hierdie stelsel, 'n nuwe ontwikkeling van Korf-Fuchs, maak voorsiening vir 'n waterverkoelde flens, met die waterverkoelde panele aan die buitekant gemonteer in verhouding met die onderste deel van die oond. Op hierdie wyse word verhoed dat enige lekkende water die vuurvaste stene van die herd bereik.

Die nuwe oonddoppe, wat deur Korf-Fuchs ontwerp is, is deur SA

BRIEFLY

THE CONVERSION of the electric arc furnaces at Iscor's Vanderbijlpark Works into a water-cooled system has resulted in higher production at lower operating costs. Three new furnaces, of split-shell design and equipped with Korf-Fuchs water-cooled panels in the side walls and water-cooled roofs were installed, and a complete fourth furnace, to be used as a standby unit, was supplied.

It is expected that the cost of about R2 million will be recovered by January 1981, less than nine months after the commissioning of the first new furnace.

• Indications are that the plant's monthly production will increase by at least 10 000 tons above the previous level of 100 000 tons. During July, a new record of 111 050 ingot tons was achieved. Since the water-cooled furnaces can be "driven harder", shorter melts are possible, and should stronger transformers be used, a 30 per cent improvement in production could be achieved.

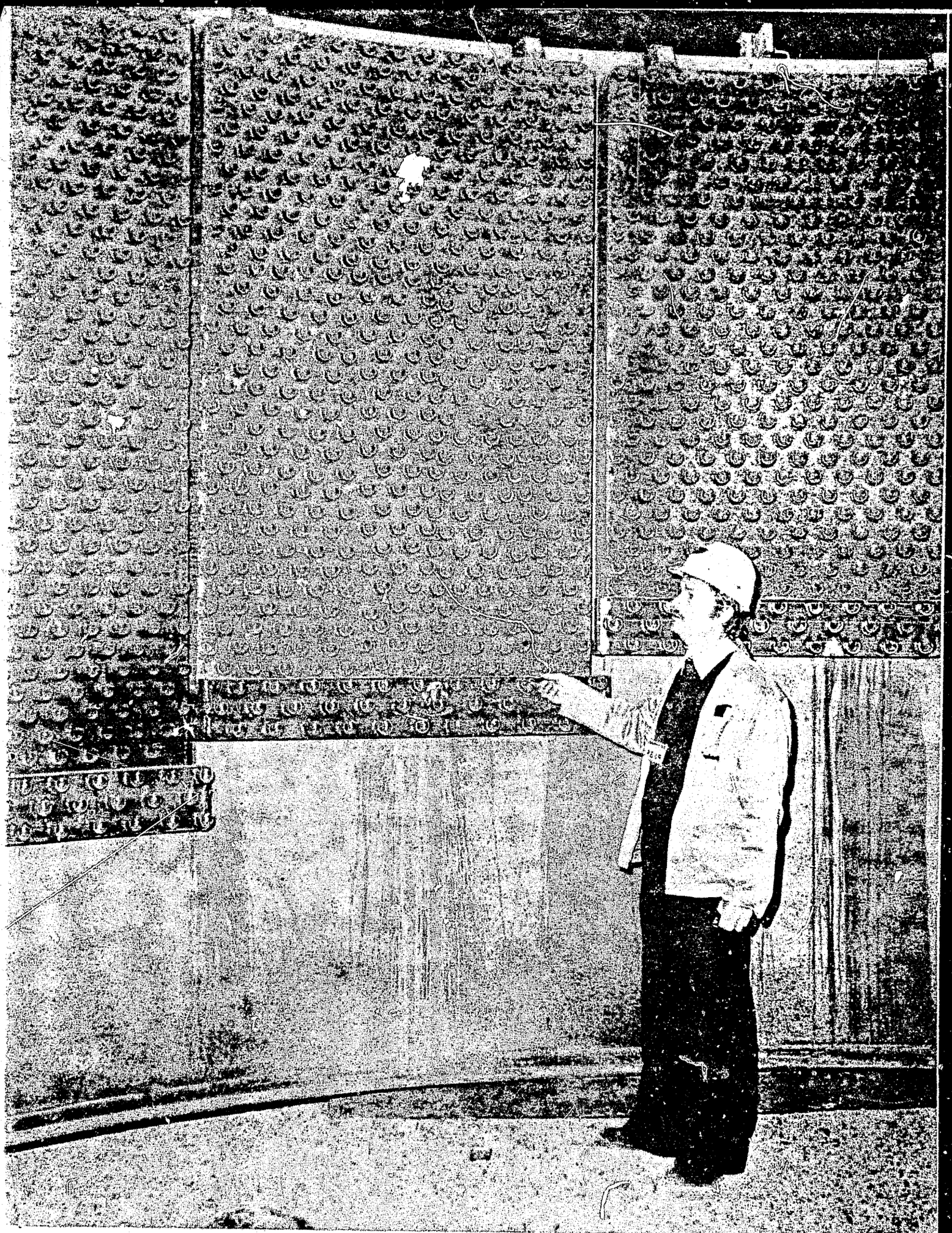
• Expenditure on refractories has dropped by R2,49 per ton of steel produced, and a further decrease is expected.

• A 17,2 per cent saving in electrode consumption, which used to cost Iscor R1 million a month, has already been achieved.

The main contractor for the project was Didier (SA) (Pty) Limited, and the new furnace shells, with a local content of 100 per cent, were manufactured by SA Linde Chemical Engineering and Manufacturing (Pty) Limited. The latter firm will in future also supply panels, to the Korf-Fuchs design, for the furnaces.

Waterkoelingspanele binne 'n oondseksie. Die „hakies" wat soos klein perde-hoefysters lyk, is aan die panele aangebring om slak vas te hou sodat 'n isoleringslaag gevorm kan word om die panele te beskerm en hitteverlies te verminder.

Water-cooling panels inside a furnace section. The studs resembling small horseshoes were attached to the panels to retain slag so that an isolating layer can be formed to protect the panels and to reduce loss of heat.

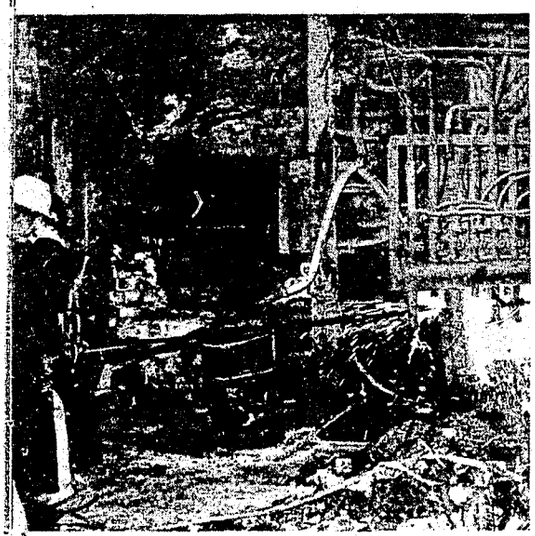


Linde Chemiese Ingenieurswerk en Vervaardiging (Edms) Beperk in sy fabriek digby die Vanderbijlparkwerke vervaardig, met 'n plaaslike inhoud van 100 persent. Hoewel die waterverkoelde panele vir drie oonde deur Korf-Fuchs in Wes-Duitsland vervaardig is om die projek binne die kontraktyd van 35 weke vanaf die bestellingsdatum te kon voltooi, is die panele vir die ekstra vierde oond deur SA Linde van Yskor-staal vervaardig, en hierdie firma sal in die toekoms al die benodigde panele voorsien. Die volledige vierde oond wat in die aanleg gereed staan, maak dit moontlik om 'n oond wat probleme oplewer, vinnig te vervang. 'n Stel panele sal 'n jaar, en moontlik selfs twee jaar, hou voordat dit vervang moet word.

Die voltooiing van die projek in die bepaalde tyd het volkome koordinering van die boogoond-aanleg en die kontrakteur se bedrywighede geverg. Om staalproduksie so min moontlik te ontwrig, is twee oonde op 'n slag in bedryf gehou terwyl die ander een vervang is, en eers nadat 'n nuwe oond in bedryf gestel is, is oorgegaan tot die vervanging van die volgende een.

'n Ou oond word afgetakel om plek te maak vir 'n ten volle waterverkoelde oond.

An old furnace is dismantled to make way for a fully water-cooled furnace.



Die aftakeling van die ou oonde is uitgevoer deur die aanleg se Instandhoudingseksie wat, met beperkte tyd en mannekrag beskikbaar, dag en nag gewerk het om elke ou oond te verwyder, die wieg te herstel en te wysig vir die nuwe oond en die bykomende toerusting op te knap. Vir elk van die oonde is hierdie take binne drie dae afgehandel, wat die hoofkontrakteur in staat gestel het om die nuwe oonde in die bepaalde tyd op te rig.

Met al drie nuwe oonde tans suksesvol in bedryf, is dit reeds duidelik dat die oorskakeling groot voordele sal meebring.

'n Waterverkoelde oond sal minder uit bedryf wees as 'n ou oond, wat na 'n kampanje van sowat drie weke herbou moes word . . . 'n taak wat 24 tot 30 uur in beslag geneem het. Voortaan sal kampanjes heelwat langer duur — minstens 10 weke — en sal 'n oond waarskynlik binne agt uur herbou kan word. Die oonde sal dus minder uit bedryf wees, wat 'n belangrike faktor is in die lig daarvan dat sowat 50 ton staal per uur by die aanleg geproduseer word. 'n Kampanje van soveel as 536 ladings is reeds behaal.

Met die installering van die panele is die oonde inderdaad vergroot: van 6,7 m tot 7,1 m in deursnee. Die gevolg is dat die elektrodes tans verder van die symure is, sodat 'n langer boog aangewend kan word. In die dele wat nog met vuurvaste stene uitgevoer is — wat voorheen elke drie weke vervang moes word — sal vervanging voortaan eers na sowat 10 weke hoef te geskied weens die laer steentemperature. Die nuwe dakke is uitgevoer met slegs sowat 10 persent van die hoeveelheid stene wat voorheen gebruik is.

Wat die verbruik van vuurvaste stene betref, dui eerste resultate op 'n besparing van R2,49 per ton staal geproduseer, en die verwagting is dat die koste nog verder sal daal namate meer ondervinding opgedoen word.

Elektrodeverbruik het, weens die langer boog wat gebruik word, met 17,2 persent verminder vergeleke met die vorige laagste verbruik, en dit blyk dat elektrodes ook minder as tevore breek omdat hulle 'n wyer kanaal deur die skrot smelt. Voor die oorskakeling het Yskor maandeliks R1-miljoen aan elektrodes bestee.

Met die waterkoelingstelsel is dit moontlik om die oonde „harder te dryf", wat smelttyd sal verminder. 'n Studie word tans gedoen met die oog op die moontlike gebruik van sterker transformators wat die smelttyd — tans sowat 2½ uur per lading van 150 ton — na verwagting met byna 'n uur sal verminder. Dit kan 'n verhoging van 30 persent in die aanleg se produksie meebring.

Die hele smeltproses is tans makliker, aangesien die baddiepte van 1,5 m tot 1,2 m verminder is, wat beter vermenging van staal moontlik maak, sodat analiseverskille uitgeskakel kan word.

Werktoestande by die oonde het ook verbeter, veral bo-op 'n oond, waar voorheen in geval van onderbrekings gewag moes word totdat die dak afgekoel het voordat herstelwerk uitgevoer kon word.

Tans word watertemperature in die panele — daar is 17 panele in 'n oond en nege in 'n dak — op 'n mikrorekenaar gemonitor. Daar word egter beoog om later, met behulp van die rekenaar, dinamiese beheer van die hele smeltproses in te stel . . . wat slegs deur die waterkoelingstelsel moontlik gemaak word. Dan sal hierdie aanleg een van die eerstes in sy soort ter wêreld wees wat volle outomatiese beheer sal toepas.

● Gelyktydig met die installering van die waterverkoelde panele is die hele elektriese beheerstelsel van die oonde se toerusting van die konvensionele kontaktor-tipe beheer na die programmeerbare „Modicon"-stelsel verander. Personeel van die Elektriese Toetsseksie en die aanleg se Instandhoudingseksie het 'n puik prestasie behaal deur binne 'n tydperk van slegs ses maande nadat op die verandering besluit is, nuwe beheerkamers met die verwante toerusting daarin te ontwerp, te bou en in bedryf te stel.

Beroepskeuses vergemaklik

'N „LOOPBAANLÊER" wat deur beroepsvoorligtingsonderwysers, ouers en kinders geraadpleeg kan word met die oog op beroepskeuses, is deur Yskor se Pretoriawerke opgestel. Kopieë van die lêer, wat ook kleurfoto's bevat, sal aan skole in die werke se werwingsgebied beskikbaar gestel word en blaaie met verouderde inligting sal van tyd tot tyd deur ander met nuwe inligting vervang of aangevul kan word, sodat die lêers op datum sal bly.

Intussen is die werknemer wat nou gemoeid was met die samestelling van die lêer, mnr. Piet Britz, Senior Personeelassistent by die werke, op versoek gesekondeer aan die Mannekrag 2000-kommissie, wat deur die Departement van Mannekragbenutting in die lewe geroep is om na aanleiding van die Riekert- en Wiehahn-kommissies se bevindings die land se arbeidsituasie te ondersoek. Die Mannekrag 2000-kommissie beoog om 'n loopbaanlêer soortgelyk aan dié van Yskor, wat alle beroepe in die land sal dek, die lig te laat sien. Mnr. Britz verteenwoordig in die kommissie die operateurs- en tegniese beroepe in die nywerheid en is een van die drie skrywers van die loopbaanlêer wat deur die kommissie uitgegee sal word. Dit sal hopelik teen die einde van vanjaar verskyn.

Die lêer van die Pretoria-werke beskryf al die nerings wat in dié werke beoefen word. Dit beslaan 15 hoofstukke en dek onderwerpe soos personeeldienste, die werk van ingenieurs, skeikundige en laboratoriumassistente, tegnici, vakleerlinge, produksiewerkers, natreksters en tekenaars, administratiewe dienste, rekeningkundige en bedryfsekonomiese rigtings, rekenaarloopbane en die poste van tiksters en telefoniste. Verdere hoofstukke handel oor diensvoorwaardes, voordele en fasiliteite, werkmoontlikhede vir applikante wat die praktiese kursus op skool geneem het, en 'n salarissleutelskaal. Heel agter in die lêer is plek in plastieksakkies vir die bewaring van loopbaanbrosjures.

Die loopbane word in besonderhede behandel. Inligting oor wat 'n besondere werk behels, wat die toelatingsvereistes is, watter opleiding die Korporasie bied, en die salarisskale en vorderingsmoontlikhede word uitgestippel. Voornemende werknemers sal 'n goeie idee kan vorm van wat 'n bepaalde beroepsrigting inhou.

Die plan is dat die lêer ook deur finalejaar-skoliere om die beurt huis toe geneem sal word vir insae deur hulself en hul ouers. Ouers speel 'n belangrike rol in hul kinders se beroepskeuse, sê mnr. Britz, en hulle het gewoonlik 'n inherente vrees vir opleidingskoste. In die Yskor-lêer sal hulle kan sien dat hul kinders, wat die meeste beroepsrigtings betref, eintlik betaal sal word om opgelei te word.

Mnr. Britz se ideaal is nou dat 'n loopbaanlêer, wat verteenwoordigend van beroepskeuses by die Korporasie in die algemeen sal wees, opgestel moet word.

Mnr. Piet Britz met 'n kopie van die „loopbaanlêer" wat aan skole in die werwingsgebied van die Pretoria-werke van Yskor beskikbaar gestel sal word

Mr. Piet Britz with a copy of the "careers file" which will be made available to schools in the recruiting area of the Pretoria Iscor Works.

BRIEFLY

A "CAREERS FILE" which may be consulted by vocational guidance teachers, parents and children when decisions on careers have to be made, has been compiled by the Pretoria Iscor Works. Copies of the file, which contains colour photographs, will be made available to schools in the recruiting area of the works and pages with outdated information will from time to time be replaced or supplemented by others with new information, keeping the files up to date.

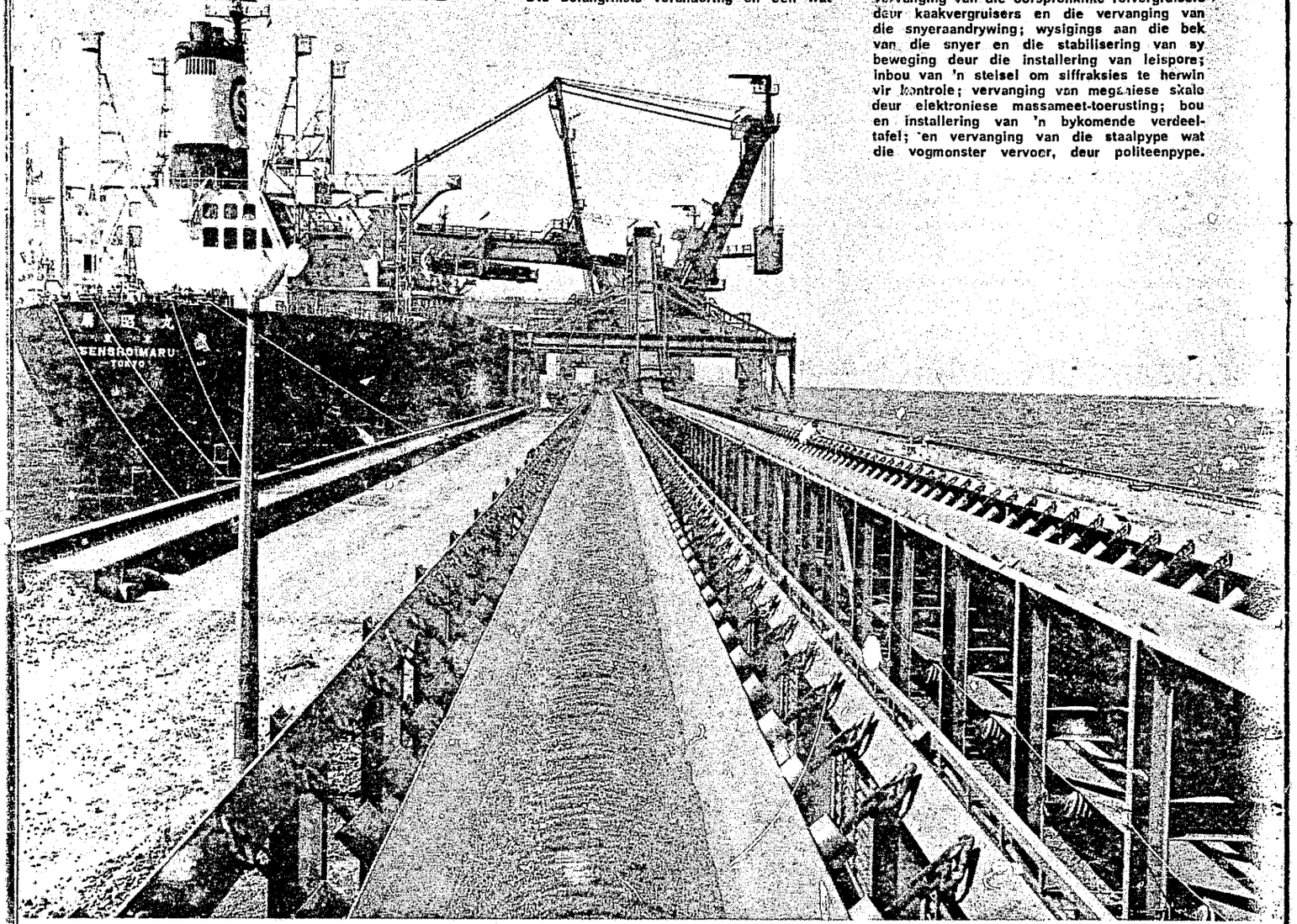
In the meantime the Iscor employee who was closely involved with the compilation of the file, Mr. Piet Britz, Senior Personnel Assistant at the works, has on request been seconded to the Mahpower 2000 Commission, which was established by the Department of Manpower Utilization as a result of the Riekert and Wiehahn Commissions' findings to study the labour situation in the country. Mr. Britz represents the industrial operator and technical occupations on the commission and is one of the three authors who are compiling a file similar to the Iscor one on all occupations in South Africa. It is hoped that the file will be completed by the end of the year.

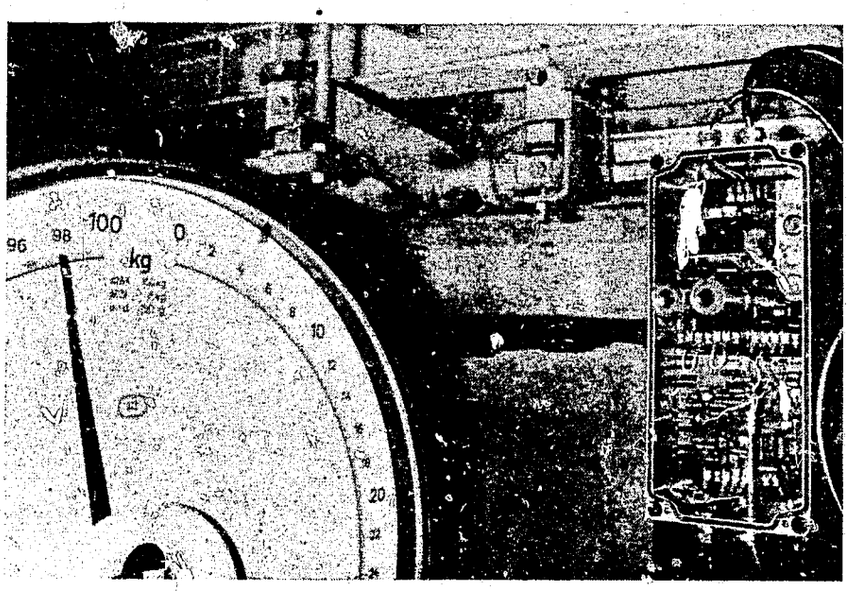
KORTLIKS

PERSONEEL van Yskor se Departement Navorsing en Prosesontwikkeling het verskeie verbeterings, sommige uniek, aangebring aan die monsterneemaanleg vir ystererts by Saldanhabaai. Die gevolg is dat die aanleg nou voldoen aan die streng bepalings van die Internasionale Standaarde-organisasie (ISO) wat sowel die werking as die noukeurigheid daarvan betref.

Die belangrikste verandering en een wat die aanleg waarskynlik uniek in die wêreld maak, is die rekenaar wat geïnstalleer is om sekere prosesse te beheer. Dié rekenaar is ontwerp en gebou deur Yskor se navorsingspersoneel en die belangrikste funksie wat dit verrig, is om die werking van die snyer (die bak wat die monsters uit die ertsstroom skep) te beheer.

Ander veranderings behels onder meer die vervanging van die oorspronklike rolvergruisers deur kaakvergruisers en die vervanging van die snyeraandrywing; wysigings aan die bek van die snyer en die stabilisering van sy beweging deur die installering van leispore; inbou van 'n steisel om siffraksies te herwin vir kontrole; vervanging van meganiese skaal deur elektroniese massameet-toerusting; bou en installering van 'n bykomende verdeeltafel; en vervanging van die staalpype wat die vogmonster vervoer, deur politeenpype.



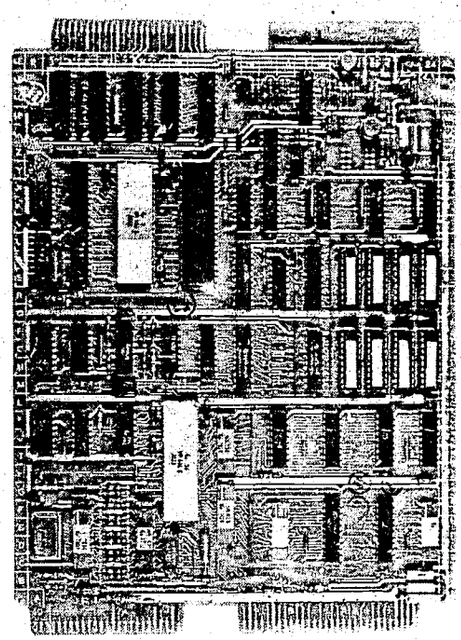


A stream of ore at the Saldanha terminal on its way to the shiploader from where it will flow into the holds of the ore carrier moored alongside the loading jetty.

'n Stroom erts by die Saldanha-eindpunt op pad na die skeepslaaier vanwaar dit in die ruime sal vloei van die ertsdraer wat langs die laaikaai vasgemeer is.

The old and the new . . . on the left the indicator of the original mechanical scale and on the right the electronic loadcell amplifier which feeds a signal to the computer.

Die oue en die nuwe . . . links die aanwyser van die oorspronklike meganiese skaal en regs die elektroniese vragselversterker wat 'n sein na die rekenaar voer.



Single-board micro-processor which is the heart of the control system used in the sampling plant.

Enkelbord-mikroprosesseerder wat die hart is van die beheerstelsel wat in die monsterneemaanleg gebruik word.

Iron ore sampling to international standards

PERSONNEL of Iscor's Research and Process Development Department have effected several improvements, some of them quite unique, to the iron ore sampling plant at the Saldanha Bay ore terminal. The overall result is that the plant now complies with the strict specifications laid down by the International Standards Orzanization (ISO) in both operation and accuracy. The plant is an integral part of the ore handling facilities at the terminal and is therefore run by the South African Railways and Harbours, but Iscor is the sole consultant responsible for its proper technical functioning in accordance with the above specifications.

The plant is designed to take samples on a continuous basis, while the ore is being loaded into an ore carrier, for moisture content, size grading and chemical analysis — the three most important qualities determining the price of ore. For the Corporation, as a seller of ore, it is essential to have a plant which is reliable and gives accurate results for product and market development and also in the event of a dispute arising between seller and buyer (who also samples the ore on arrival) owing to discrepancies in the results obtained.

The operation of the plant, which is fully automatic, can be briefly described as follows: A primary cutter which moves through the stream of ore on its way to the ore carrier is situated at a transfer point between two conveyors, where it takes what is termed a primary increment. The cutter is in the form of a bucket which scoops up a sample (primary increment) from the ore stream. This primary increment is then fed into a bin which in turn feeds the automatic sampling plant. The increments are taken in such a way that every alternate one is fed to both the moisture and the chemical sides. This means that an increment is crushed and a sample taken for moisture analysis. Then it is crushed down further to form a total bulk sample for chemical analysis. The next increment that comes along, goes for screening (size grading). The increments therefore follow alternative routes, one for chemical and the other for physical analysis.

The most significant alteration made to the sampling plant by Research and Process Development personnel concerns the primary cutter which can be regarded as the "heart" of the plant because if the primary increments are not right, none of the operations that follow, will be correct.

It was decided that the best results could be obtained if the operation of the cutter were to be computerized. For this purpose an on-line dedicated computer was designed and built by the research personnel and installed in the plant, making it probably the first plant in the world to be operated in this way.

The main object with the installation of the computer was to try and randomize the increments taken by the cutter. In most sampling plants the cutter simply cuts at fixed time intervals, whereas the theoretical ideal is to have a cutter which takes random increments.

The situation is that when primary increments are taken, this should be effected over a certain number of tons because at Saldanha the method of sampling is known as stratified constant mass sampling, which means that an increment is taken of every given constant mass of ore passing on the conveyor. So, for example, for a certain ship — the mass varies with the size of the ship — an increment must be taken at a random

point for every 1 500 tons of ore loaded.

In practice this means that since the tonnage to be loaded is known beforehand, the load is split up into the required number of lots or strata as laid down by the ISO standards. Increments are then taken at some point of every stratum. In this way the sampling procedure followed at Saldanha is getting as close as possible to the theoretically correct way of sampling.

Apart from controlling the operation of the cutter, the computer is also used to perform a number of other useful functions. By means of a keyboard in the control room, the operator can feed relevant data to the computer, such as the name of the ship being loaded, the type of ore — whether it is fine or lump ore — and the quantities of fine or lump ore to be loaded. In turn the computer works out at what intervals the cutter will take increments. It will also notify the operator when something goes wrong in the sampling plant, such as the malfunctioning of the screens or the cutter it[self].

Moisture sampling is still done manually in that an attendant takes a moisture sample, puts it on a scale and weighs it. The sample is then dried and again placed on the scale and weighed. The results are fed to the computer which makes the necessary calculation and gives the moisture content.

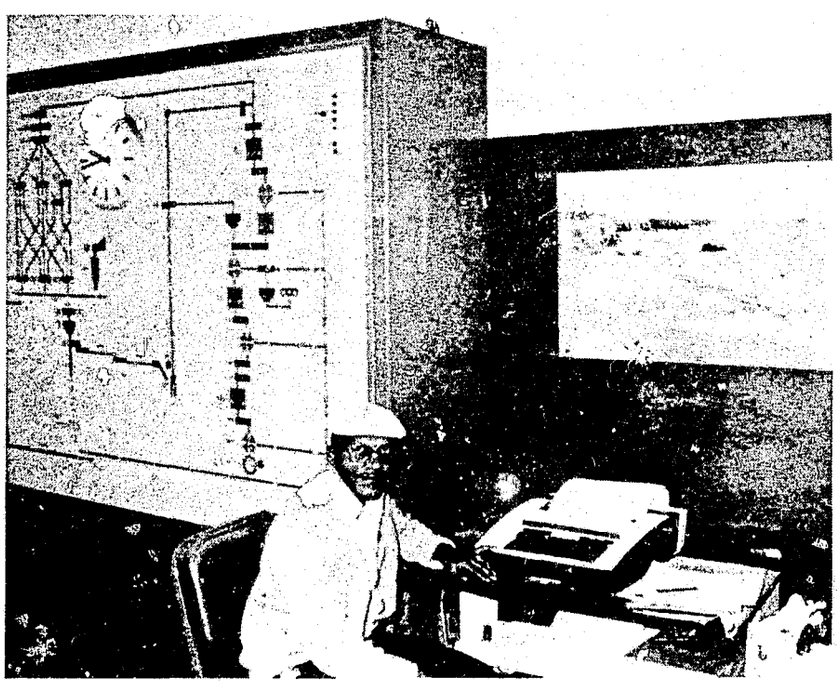
A relay station linked to the computer was installed in the controller's office, thereby further facilitating the work of the operating personnel. A continuous print-out of data keeps the controller informed, saving him the trouble of having to leave his office to inspect the operation of the plant. In addition, the computer does all the statistical calculations after the ship has been loaded. In this way it has made the work load of the personnel much lighter, at the same time giving quick and accurate results.

Some of the other important alterations made to the plant include the following:

- The means of adjusting the cutter blades was changed and new guide rails were designed and fitted to stabilize the movement of the cutter.
- The whole cutter drive was altered. The constant-speed motor with variable-speed gearbox was replaced by a DC thyristor-controlled motor which is linked to the computer. This has resulted in more accurate control of the cutter.
- The rolls of the original roll crushers were worn down so fast by the hard Sishen ore that it was difficult to keep the gap right, with the result that material came through too large. This had a detrimental effect on the chemical analysis. The problem was solved by replacing the roll crushers with jaw crushers, which are giving satisfactory results.
- The introduction of a system whereby screen fractions can be retrieved and checked. This was done by installing chutes below the screen feeding into bins on wheels. The increments can now be collected from these bins for control checks.
- All the mechanical scales were replaced by electronic mass-measuring equipment, resulting in much greater accuracy.
- Installation of an extra dividing table for splitting moisture samples. This table was designed and built in workshops of the Pilot Plant of the Research and Process Development Department.
- Replacing by way of an experiment the steel tubes conveying the moisture samples by high-density polythene tubes. These tubes have a non-wettable and moisture repellent surface, resulting in less moisture loss as the ore passes through. A further advantage of the polythene tubes is that they do not rust. When the[y] were installed, it was hoped that they would last for about six months. They have [b]een in use for almost two years and are still operating satisfactorily except for wear at one or two sharp corners. As far as is known, Iscor is the first to use polythene tubing in a sampling plant.

The print-out unit in the control room. Information about moisture content is also entered at this computer terminal.

Die drukstukeenheid in die beheerkamer. Inligting oor voginhoud word ook by hierdie rekenaarterminaal ingevoer.



GROOTEGELUK lewer eerste steenkool

YSKOR se Grootegeluk-steenkoolmyn naby Ellisras is in produksie. Die eerste versending aan die Vanderbijlpark-werke het bestaan uit 35 spoortrokke met 'n vrag van sowat 1 400 ton mengkooksteenkool, met 'n asinhoud van 9 persent.

Grootegeluk se geologiese reserwes mengkooksteenkool word op ongeveer 500-miljoen ton beraam, wat die myn teen die beplande produksiepeil 'n verwagte lewensduur van veel meer as 'n eeu gee. Wanneer hierdie myn volskaals produseer, sal hy, saam met die produksie van Yskor se Durnacol-steenkoolmyn in Natal, die Korporasie tussen 40 en 50 persent selfvoorsienend ten opsigte van kooksteenkool maak. Yskor produseer tans nagenoeg 20 persent van sy kooksteenkoolbenodigdhede.

Die ontwikkeling van die myn het oor nagenoeg ses jaar gestrek. Onderhandelings vir die aanstelling van 'n konsultant om behulpsaam te wees met die ontwerp van 'n aanleg is teen die einde van 1974 gevoer en het gelei tot die aanstelling van ASV Engineering (Edms) Bpk in dié hoedanigheid. Sy funksie was om die nodige tekeninge vir 'n bedryfsklaarnavraag te lewer.

'n Proefgleuf is in Maart 1975 op die plaas Enkelbult ontwikkel, en die Hoornbosch-aanleg — met 'n vermoë van 25 ton per uur — wat voorheen matkool vir vormkookstoetse geproduseer het, is gebruik vir die veredeling van sowat 12 000 ton ru-steenkool, 1 400 ton mengkooksteenkool met 'n asinhoud van 10 persent en 'n ooreenstemmende tonnemaat middelskotsteenkool met 'n asinhoud van 35

Stapeling van die eerste steenkool.
Stacking of the first coal.

persent. Finale proefaanlegtoetse is gedurende Augustus 1975 gedoen.

Lede van die projekspan het vroeër daardie jaar op 'n oorsese besoek gegaan om finale besluite te neem ten opsigte van die belangrikste veredelingstoerusting.

'n Kontrak vir die eerste area van die veredelingsaanleg — die primêre vergruis-en-sifaanleg en opgaarsilo's — is in Januarie 1976 geplaas op grond van tenders ontvang. Die suksesvolle kontrakteur was Edward L. Bateman Ltd.

Toentertyd was beplan om die res van die kontrakte vir die veredelingsaanleg die volgende maand te plaas.

As gevolg van die destydse ekonomiese resessie in Suid-Afrika het Yskor dit egter vanweë die kapitaalskaarste gerade geag om eers groot en bykans voltooide projekte af te handel al ens nuwe kapitaalintensiewe projekte soos die Grootegeluk-steenkoolmyn voortgesit sou word. Ten opsigte van die myn is daar slegs met reeds bestaande kontrakte voortgegaan. Die res van dié projek het tydelik tot stilstand gekom en die myn se aanvanklike inbedryfstellingsdatum is uitgestel.

Vanweë verskeie voordele is daar intussen voortgegaan met deklaagstroping in die groef en die beplanning van die veredelingsaanleg.

Teen die einde van 1977 is finansiering vir die aanleg daargestel deur 'n finansiële bruikhuurooreenkoms tussen Yskor en die Standard Bank Nasionale Industriële Kredietkorporasie Beperk (Stannic). Die Yskor-raad het dié ooreenkoms in Januarie 1978 gemagtig en die mynprojek het 'n nuwe fase betree.

Die konstruksieprogram is hersien om in te pas by die Korporasie se langtermyn-steenkoolvoorsieningsprogram. Staatsdepartemente verantwoordelik vir sekere elemente van die infrastruktuur (kyk *Yskornuus,* Augustus 1980) is versoek om hul werksaamhede te versnel en stappe is gedoen om die res van die nodige kontrakte te sluit.

Kontrakte het die bou van skaalmodelle in die verhouding 1:25 en die daarstelling van konstruksienetwerkprogramme ingesluit. Detail-ontwerp het ongeveer 6 000 tekeninge behels.

Verdere navrae is vroeg in 1978 met behulp van hierdie detailontwerptekeninge uitgereik. Dié navrae het alle siviele werk, die verskaffing en oprigting van alle stukturele staal- en plaatwerk en die installering van alle toerusting wat deur die Korporasie verskaf is, ingesluit.

Die destydse ekonomiese klimaat en die omvattende navraagtekeninge het uiters mededingende tenders in die hand gewerk.

Mettertyd is tenders vir alle aanlegtoerusting ontvang en is die betrokke toerusting aan die oprigtingskontrakteurs vir installering gelewer. Grootegeluk maak in hierdie opsig Yskor-geskiedenis: dit is die eerste projek waar die Korporasie verantwoordelik was vir die lewering van al die toerusting en die kontrakteurs slegs die oprigting van die aanleg behartig het.

'n Besondere bestelling was dié by Contractors Equipment Dealers Establishment vir vervoerband-, stapel- en herwinningstoerusting gebruik tydens die bou van die Tarbela-dam in Pakistan.

Siviele werk vir die projek het in September 1978 'n aanvang geneem en die eerste staalkolomme is drie maande later opgerig.

Omdat die Korporasie alle bedryfstoerusting self aangekoop en aan die oprigtingskontrakteurs gelewer het, kon laasgenoemde nie verantwoordelik gehou word vir die vollas-inbedryfstelling — dit wil sê, onder vrag — van die aanleg as geheel nie. Daarom is dus reeds in alle navrae vir die voorsiening van toerusting bepaal dat leweransiers hulself tevrede sou stel ten opsigte van die korrekte installering asook korrekte nullas- en vollas-inbedryfstelling.

Yskor het self die verantwoordelikheid van vollas-inbedryfstelling aanvaar, terwyl die oprigtingskontrakteurs moes sorg vir korrekte installering van toerusting en nullas-inbedryfstelling daarvan, met die wete en ondersteuning van die betrokke leweransiers. 'n Tydperk van een maand is vir die nullas-fase en twee maande vir vollas toegelaat.

Aan die begin van April vanjaar is 'n aanvang gemaak met nullas-inbedryfstelling. Dit het behels die werking van alle waterpompe onder vrag (met water), die balansering van die waterstelsels, die inbedryfstelling van alle swaarmediumstelsels, met inbegrip van die pompe, uitsakkegels en ander toerusting, en die „koue" inbedryfstelling van alle ander toerusting van die aanleg.

Tydens hierdie stadium was dit nodig dat al die leweransiers van toerusting op die terrein moes wees om toe te sien dat die werk reg gedoen word. Die projekspan het die nodige koördinering van bedrywighede behartig.

Die volgende maand is die eerste steenkool aan die primêre vergruiser toegevoer, waarmee die vollas-inbedryfstellingsfase ingelui is. Op hierdie tydstip is volle verantwoordelikheid deur die oprigtingskontrakteurs aan die projekspan oorgedra, en die projek-verantwoordelikhede van die individuele spanlede het toe ook gaandeweg oorgegaan tot die uiteindelike be-

BRIEFLY

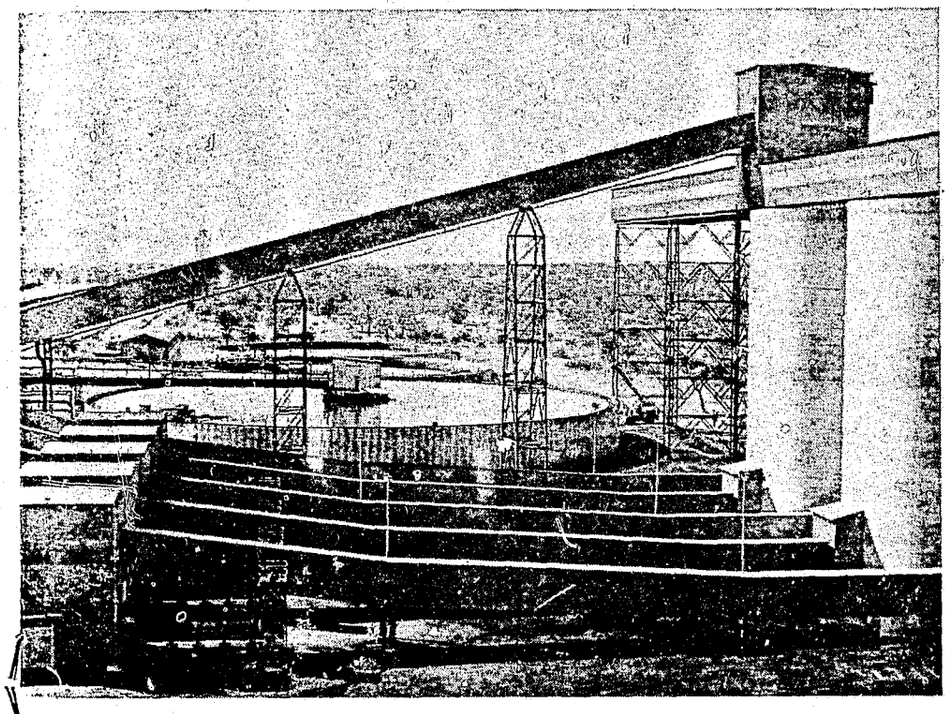
ISCOR'S Grootegeluk coal mine near Ellisras has started production. The first train-load, consisting of approximately 1 400 tons of blend coking coal transported in 35 rail trucks, was dispatched to the Vanderbijlpark Works on 23 July — a week before the scheduled date. Since then, similar loads have been following almost every second day.

The development of Grootegeluk has made Iscor history in the sense that it was the first project of this nature for which the Corporation assumed full responsibility regarding the supply of all the equipment for the plant, while the contractors undertook only the erection of the entire plant. The various suppliers had to satisfy themselves that installation and commissioning of their equipment had been done correctly.

A project team co-ordinated all the activities through the successive stages.

Die trein wat die eerste vrag steenkool na die Vanderbijlpark-werke vervoer het, breek die „lint" onderw[illegible] na die laaistasie.

The train which transported the first load of coal to the Vanderbijlpark Works, breaking the "tape" on its way to the loading station.



Silo's met toevoerbande na die sekondêre swaarmedium-sikloonaanleg. Op die agtergrond is verdikkers te sien.

Silos with feed conveyors to the secondary heavy-medium cyclone plant. Thickeners can be seen in the background.

Die eerste spoortrok is byna vol.

The first rail truck is almost full.

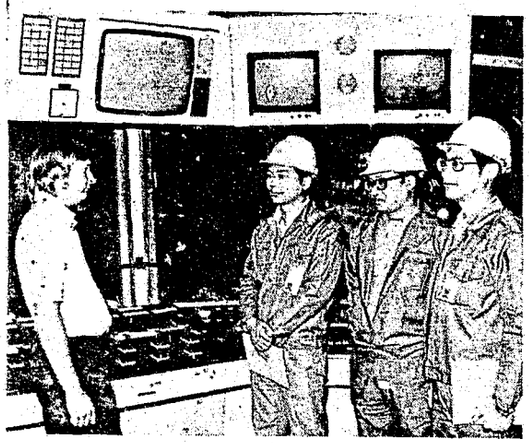
dryfs- of instandhoudingspligte.

Die span-verantwoordelikhede het ingesluit die vollas-inbedryfstelling as sodanig en die regstelling van enige ontwerpfoute of metallurgiese aanpassing wat nodig was om die aanleg goed te kan bedryf.

Aangesien funksionering van die aanleg uit 'n aaneenskakeling van talle werksaamhede bestaan, het die vollas-inbedryfstelling oor die tydperk van twee maande basies vanaf die primêre vergruiser tot by die produk-stapelbeddens gestrek, in die volgende orde:

- Primêre vergruis-en-sifaanleg (area 01).
- Afvalhanteringstelsel (area 06).
- Primêre swaarmedium-sikloonaanleg (area 02).
- Swaarmedium-dromaanleg (area 03).
- Sekondêre swaarmedium-sikloonaanleg (area 04).
- Produkstapel- en -herwinningstelsels (area 07).
- Steenkool-laaistasie (area 08).

Op 13 Junie is die eerste steenkool deur die aanleg — een van die grootstes in sy soort in die Westerse wêreld — geproduseer en op 'n stapelbed met 'n kapasiteit van [illegible] 000 ton geplaas. Die eerste treinvrag van 1 400 ton is op 23 Julie versend, 'n week voor die gegeskeduleerde datum, en sedertdien het daar feitlik elke tweede dag 'n soortgelyke vrag gevolg.



Three CSC production engineers — from the left, Messrs. C. H. Wu, C. E. Huang and D. F. Hwang — with Mr. M. L. Labuschagne, Second Roller, in the control cabin of a five-stand tandem cold mill.

Drie produksie-ingenieurs van CSC — van links, mnre. C. H. Wu, C. E. Huang en D. F. Hwang — saam met mnr. M. L. Labuschagne, Tweede Walser, in die beheerkajuit van 'n vyfstelling-tandemkoudwalsery.

The first group of China Steel Corporation employees to be trained at Iscor's Vanderbijlpark Works, photographed with Messrs. J. G. Riddell (seventh from the left), General Works Manager, and J. H. Nott (ninth from the left), leader of the training project. The visitors, all engineers, are, from the left: Messrs. T. Y. Hsieh, J. S. Lee, C. H. Kao, C. H. Wu, S. M. Lan, H. Y. Lee, C. E. Huang, D. F. Hwang, M. N. Cheng and Y. C. Ming.

Die eerste groep werknemers van die China Steel Corporation wat by die Yskor-werke op Vanderbijlpark opgelei word, afgeneem saam met mnre. J. G. Riddell (sewende van links), Hoofwerkebestuurder, en J. H. Nott (negende van links), leier van die opleidingsprojek. Die besoekers, almal ingenieurs, is, van links: Mnre. T. Y. Hsieh, J. S. Lee, C. H. Kao, C. H. Wu, S. M. Lan, H. Y. Lee, C. E. Huang, D. F. Hwang, M. N. Cheng en Y. C. Ming.

Iscor trains China Steel men

THE MODERN Iscor steelworks at Vanderbijlpark has become a training centre for 92 employees of the China Steel Corporation (CSC), of the Republic of China.

In terms of a contract between CSC and Iscor, 48 engineers and 44 production workers of CSC will receive in-plant training, mainly in steel rolling, plant maintenance and quality assurance. The first group, consisting of 10 engineers, arrived in South Africa last month. The training programme extends over a period of 13 months, and the visitors will stay at Vanderbijlpark for periods varying from one month to three.

The conclusion of this training agreement can be regarded as an expansion of the economic relations between the two republics. During the past year, the ties between these countries were strengthened by visits to South Africa by the Prime Minister of the Republic of China, Mr. Sun Yun-Suan, and an official delegation headed by Dr. Kwang-Shih Chang, Minister of Economic Affairs.

- The visit by Dr. Chang's party (the itinerary included Iscor's Pretoria Works) in November last year led to a widening of the existing bilateral trade agreement and paved the way for co-operation in other fields.
- During the Prime Minister's visit in March this year, several technological and economic agreements were concluded.

Two metallurgical engineers of the China Steel Corporation, Messrs. T. Y. Hsieh (centre) and J. S. Lee, discuss the functioning of a tensile testing machine with Mr. P. E. du Plessis, Co-ordinator of the Test House of Technology and Quality Assurance at the Vanderbijlpark Works.

Twee metallurgiese ingenieurs van die China Steel Corporation, mnre. T. Y. Hsieh (middel) en J. S. Lee, bespreek die funksionering van 'n trektoetsmasjien met mnr. P. E. du Plessis, Koördineerder van die Toetshuis van Tegnologie en Kwaliteitversekering by die Vanderbijlpark-werke.

KORTLIKS

ALTESAAM 92 werknemers van die China Steel Corporation (CSC), van die Republiek van China, sal by die Yskor-werke op Vanderbijlpark in-diens-opleiding ontvang, hoofsaaklik in staalwalsing, aanleginstandhouding en kwaliteitversekering, ingevolge 'n kontrak tussen die twee korporasies. Die opleidingsprogram sal oor 'n tydperk van 13 maande strek, en elk van die besoekers sal van een tot drie maande op Vanderbijlpark deurbring. Die eerste groep, bestaande uit 10 ingenieurs, het verlede maand in Suid-Afrika aangekom.

By CSC se werke in Taiwan, waar die eerste aanlegte sowat 2½ jaar gelede in bedryf gestel is, word tans 'n uitbreidingsprogram uitgevoer en word aanlegte opgerig wat soortgelyk is aan bestaande produksie-eenhede by die Vanderbijlpark-werke.

Die opleidingskontrak kan as 'n uitbreiding van die ekonomiese betrekkinge tussen die Republieke van Suid-Afrika en China beskou word.

In the past, Iscor secured orders for rails and iron ore from the Republic of China.

The China Steel Corporation was established in 1970, and its first plants were commissioned about 2½ years ago. Extensions are now being carried out at the CSC works at Kaoshung, Taiwan, where production units similar to those at Vanderbijlpark are being erected. These units include a hot-strip mill, a five-stand tandem cold mill, a continuous pickling line, batch annealers, a temper mill and shearing lines. Since equipment of the same design and manufacture has been in use at Vanderbijlpark for several years, this works is an ideal training centre for CSC personnel. In addition, the "hands-on" experience gained by them at Vanderbijlpark will stand them in good stead when they have to commission and operate their newly-constructed plants. The training programme has in fact been scheduled to coincide with the commissioning of similar production units at the CSC works.

Production engineers of Iscor will also assist CSC with the commissioning of the plants.

The training programme at Vanderbijlpark is controlled by a project team under the leadership of Mr. J. H. Nott, Manager, Operations, Rolling, with Mr. J. J. Diederichs, of Education and Training, as co-ordinator.

Iscor employees who have been selected to train the visitors, take special courses to brush up their technical knowledge, and they are provided with background information on the Republic of China. Training material for the CSC employees has been prepared by line personnel of the sections concerned. This material, which in some cases is the first to be compiled, will in future also be used for training Iscor personnel.

Technical material, programmes and schedules are supplied to all the visitors prior to their arrival. Communication with the CSC men presents no problem, since all of them have command of English.

Arrangements have been made to ensure that the visitors feel at home during their stay in Vanderbijlpark. The management of the hotel where they are accommodated has consulted with the embassy of the Republic of China about the provision of traditional dishes, and the visitors will be able to view films supplied by the embassy.

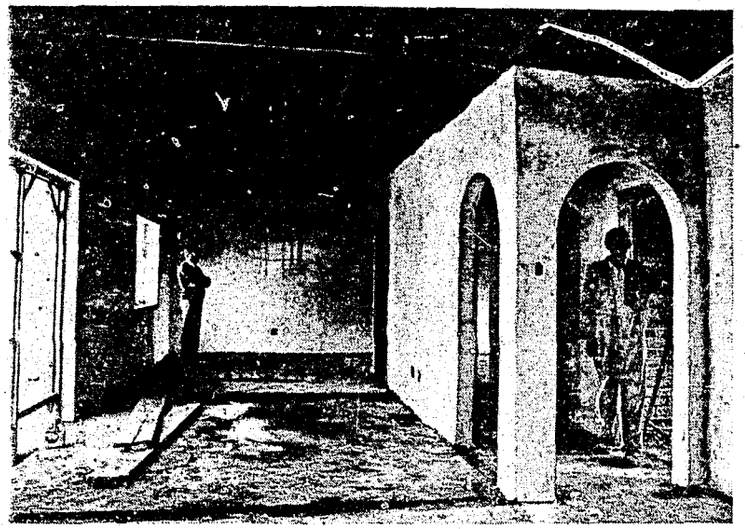
Mr. Y. C. Ming (right), a mechanical engineer, with Messrs. D. Rümelin (centre), Superintendent, Roll and Shearblade Services, and W. A. Odendaal, Supervisor, at an induction rehardening furnace. Mr. Ming will control a new roll shop being erected at the CSC works.

Mnr. Y. C. Ming (regs), 'n meganiese ingenieur, saam met mnre. D. Rümelin (middel), Superintendent, Wals- en Skêrlemdienste, en W. A. Odendaal, Toesighouer, by 'n induksie-herverhardingsoond. Mnr. Ming sal 'n nuwe walswinkel beheer wat by die CSC-werke opgerig word.

All the recreation and other facilities for Iscor employees are available to the visitors, and their sports and social activities are being catered for.

An official reception, attended by members of the Republic of China's embassy, was held by the town council of Vanderbijlpark for the first group of CSC employees who arrived in South Africa, in order to introduce them to residents of the town.

- The project received wide coverage in the South African press and on television.



'n Huis wat meer as 30 jaar gelede in een van Vanderbijlpark se oudste woonbuurte gebou is, word opgeknap.

A house built over 30 years ago in one of Vanderbijlpark's oldest suburbs, being renovated.

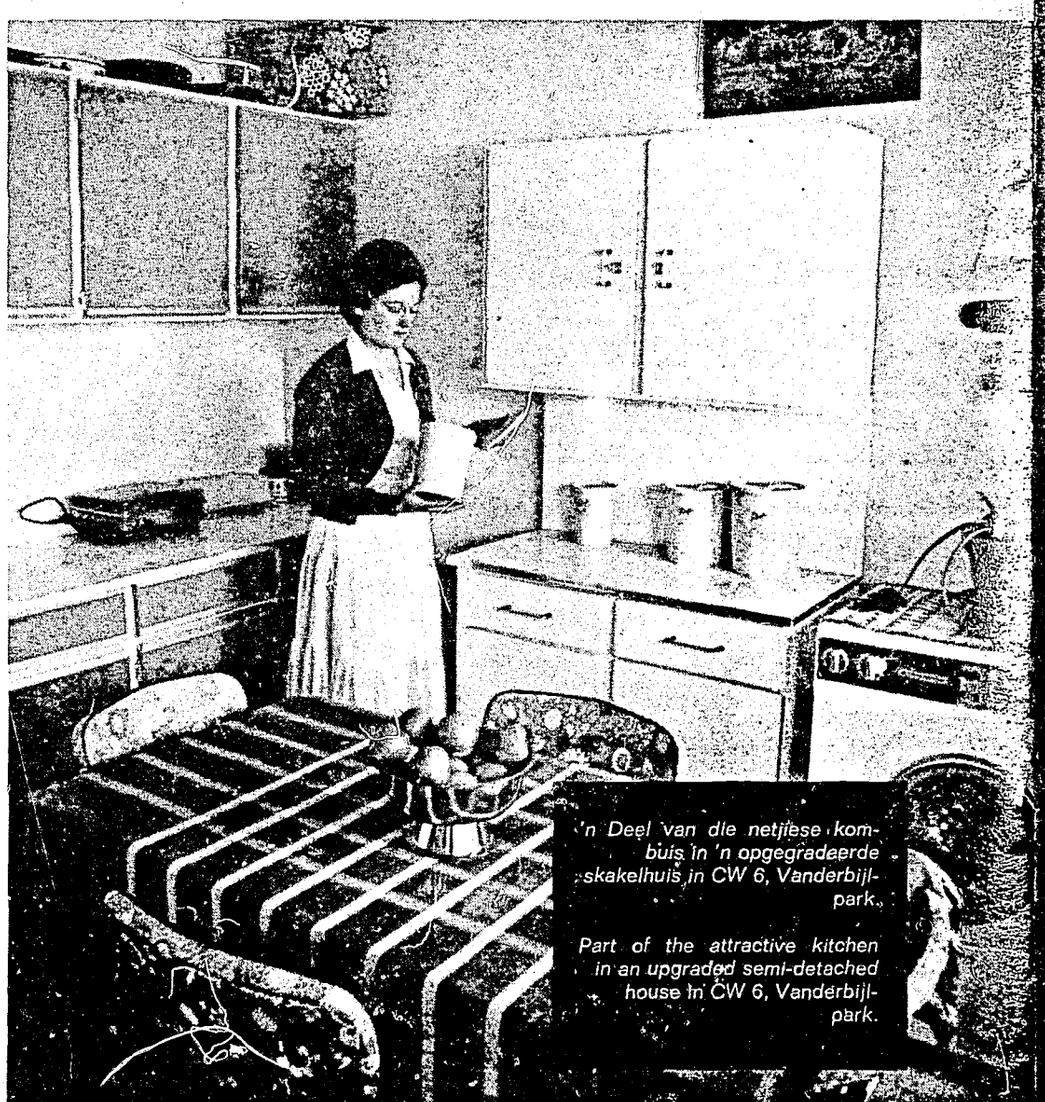
Dr. H. J. Reynders (tweede van regs), voorsitter van die Nasionale Mannekragkommissie, en prof. P. J. van der Merwe (tweede van links), adjunk-voorsitter van die kommissie, was beïndruk toe hulle onlangs opgegradeerde wooneenhede in CW 6, Vanderbijlpark, besoek het. Hier verskyn hulle voor een van die „nuwe" huise saam met mnr. H. Liebenberg (heel links), Hoof, Nywerheidsbetrekkinge, mev. U. Martin, burgemeester van Vanderbijlpark, en mnr. S. R. S. Barnard (heel regs), gewese Werkepersoneelbestuurder.

Dr. H. J. Reynders (second from the right), chairman of the National Manpower Commission, and Prof. P. J. van Merwe (second from the left), deputy chairman of commission, were impressed when they recently visited upgraded housing units in CW 6, Vanderbijlpark. Here they are seen in front of one of the "new" houses with Mr. H. Liebenberg (extreme left), Head, Industrial Relations, Mrs. U. Martin, mayor of Vanderbijlpark, and Mr. S. R. S. Barnard (extreme right), former Works Personnel Manager.

BRIEFLY

THE upgrading of 155 rental houses during the past year has resulted in a remarkable metamorphosis of one of Vanderbijlpark's oldest suburbs, CW 6. It was the first phase of a giant project to upgrade about half of the 6 500 housing units owned by Iscor in this town. The cost amounted to more than R1 million, or R6 500 per unit. Work has already started on the upgrading of 92 houses in one of the other older suburbs, CW 2.

There is a growing demand for the "rejuvenated" houses, and the project has elicited very favourable comment from visitors, including Dr. H. J. Reynders and Prof. P. J. van der Merwe, chairman and deputy chairman, respectively, of the National Manpower Commission.



'n Deel van die netjiese kombuis in 'n opgegradeerde eskakelhuis in CW 6, Vanderbijlpark.

Part of the attractive kitchen in an upgraded semi-detached house in CW 6, Vanderbijlpark.

Nuwe voorkoms vir ou huise

EEN VAN Vanderbijlpark se oudste woonbuurte, CW 6, waar die eerste huise meer as 30 jaar gelede gebou is, het 'n nuwe, aantreklike voorkoms gekry met die opgradering van 155 Yskor-huurhuise, wat so pas afgehandel is teen 'n koste van meer as R1-miljoen.

Dit maak deel uit van 'n reuseprojek waarin voorsiening gemaak word vir die opgradering van sowat die helfte van die nagenoeg 6 500 Yskor-wooneenhede op die dorp (kyk *Yskornuus,* Julie 1979).

Met die oog op die hoë en steeds stygende boukoste is daar besluit om die ou wooneenhede, waarvan die konstruksie nog baie stewig is maar wat weens gebrekkige geriewe al hoe minder aanvaarbaar vir huurders geword het, te verbou en behoorlik op te knap eerder as om hulle te sloop en nuwe eenhede op te rig.

Aanvanklik is slegs een huis opgegradeer sodat die menings van huurders daaroor ingewin kon word. Die kommentaar was baie gunstig wat die huis betref, maar omtrent die helfte van diegene wat genader is, het gemeld dat die buurt nog swak was. Daar is toe besluit om die hele omgewing, met inbegrip van tuine, sypaadjies en straatverligting, te verbeter. Die taak is aan die Vanderbijlpark-eiendomsmaatskappy (Vesco) opgedra, wat die dienste van 'n plaaslike boukontrakteur verkry het.

In Julie 1979 is met die eerste fase van die projek begin, en die laaste van die huise wat in CW 6 opgeknap is, was verlede maand gereed vir verhuring. Die gemiddelde koste per eenheid het sowat R6 500 beloop.

Die voortuine en sypaadjies is deur Vesco ontwikkel en met gras, struike en ander siergewasse beplant, en die voorste heinings is verwyder. Die projek is verwelkom deur die plaaslike stadsraad, wat meegewerk het deur randstene aan te bring en straatverligting te verbeter.

Na die opgradering van die eerste eenhede het daar 'n vraag na hierdie netjiese „nuwe" huise ontstaan, en tans word 'n waglys daarvoor gehou. Die erwe van die huise is betreklik groot, en die buurt is nie ver van die Yskor-werke geleë nie. Onder die bewoners van die eerste opgeknapte huise is verskeie jonggetroude paartjies, aan wie tweeslaapkamer-eenhede toegeken is.

Verskeie besoekers het reeds baie gunstige kommentaar oor die opgradering van die huise en woonbuurt gelewer. Tydens 'n onlangse besoek aan die plaaslike Yskorwerke het dr. H. J. Reynders, voorsitter van die Nasionale Mannekragkommissie, en prof. P. J. van der Merwe, die adjunk-voorsitter, van die opgeknapte wooneenhede besigtig en gesê dat dit hulle baie beïndruk het. Die eerste bewoners het ook op 'n vraelys aangedui dat hulle heeltemal tevrede met die huise en die woonbuurt is.

Daar is reeds begin met die tweede fase van die projek: die opgradering van 92 huise in die woonbuurt CW 2, wat teen Junie 1981 afgehandel behoort te word. Hierdie eenhede is basies soortgelyk aan dié in CW 6. Nog sowat 1 100 eenhede van dieselfde gehalte sal later aandag geniet.

Daar is ook ongeveer 2 800 eenhede, met inbegrip van woonstelle en dupleks-eenhede, wat opgradering in 'n mindere mate benodig, en dit sal mettertyd uitgevoer word. In hierdie gevalle is geen strukturele veranderings nodig nie; daar sal net verbeterings aangebring word soos die installering van nuwe kombuiseenhede, ingeboude kaste in slaapkamers en ligtoebehore.

Met die opgraderingsprojek sal verseker word dat al die Korporasie se huureenhede op Vanderbijlpark aan dieselfde standaarde voldoen.

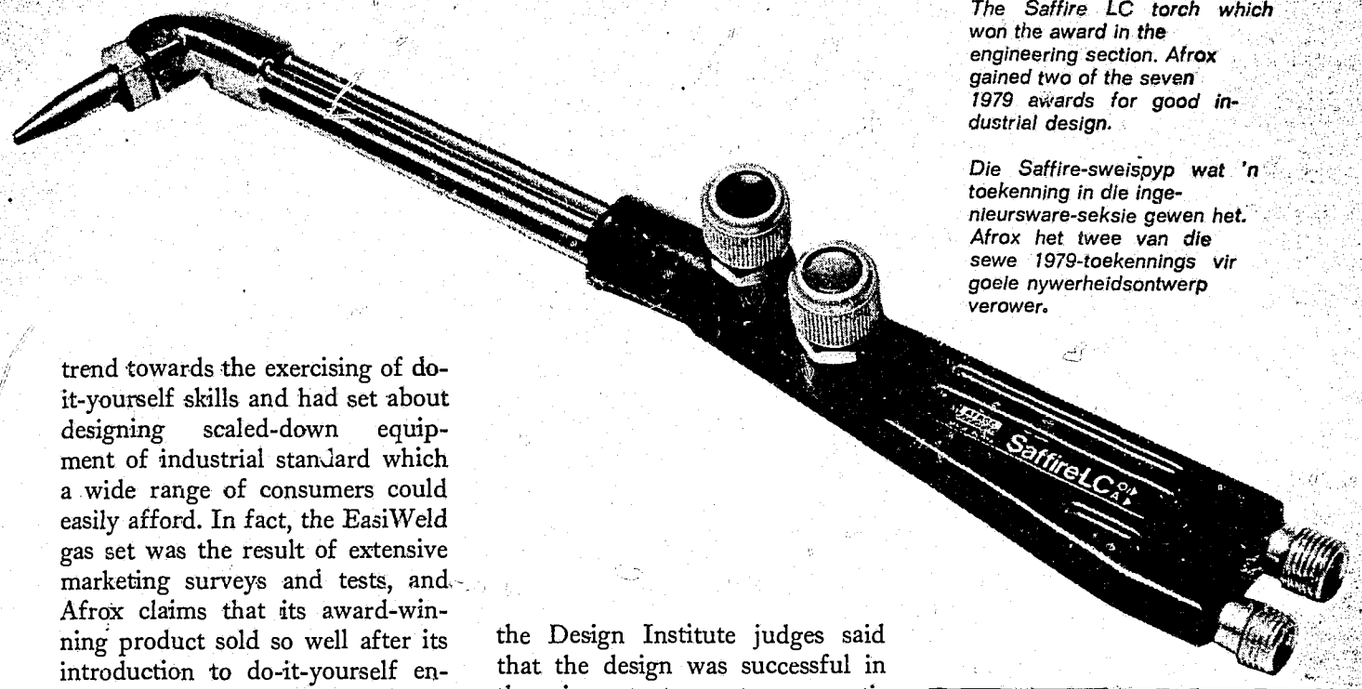
Design award for home welder

A MAJOR consumer of Iscor steel and manufacturer of welding equipment, Afrox Limited, gained two of the seven prestigious Shell Design Awards for 1979. Such awards for industrial design are made annually by the Design Institute of the South African Bureau of Standards, in consultation with Shell SA (Pty) Ltd. Both items of equipment, the EasiWeld gas set, which gained an award in the consumer category, and the Saffire LC torch, an engineering category award winner, have found ready acceptance among users of Iscor steel products.

When making the awards the panel of judges, led by the Director General of the SABS, noted that Afrox had recognized the growing

The EasiWeld gas set is specially designed for the do-it-yourself enthusiast, farmer and small business.

Die EasiWeld-gastoestel is spesiaal vir die doen-dit-self-geesdriftige, boer en klein onderneming ontwerp.



The Saffire LC torch which won the award in the engineering section. Afrox gained two of the seven 1979 awards for good industrial design.

Die Saffire-sweispyp wat 'n toekenning in die ingenieursware-seksie gewen het. Afrox het twee van die sewe 1979-toekennings vir goeie nywerheidsontwerp verower.

trend towards the exercising of do-it-yourself skills and had set about designing scaled-down equipment of industrial standard which a wide range of consumers could easily afford. In fact, the EasiWeld gas set was the result of extensive marketing surveys and tests, and Afrox claims that its award-winning product sold so well after its introduction to do-it-yourself enthusiasts that within two months stocks were running low and production had to be boosted.

The EasiWeld gas set was designed to provide farmers, hobbyists and small business owners with sophisticated welding equipment which is handy, efficient and economical. It can be used for a wide range of brazewelding and cutting operations.

An important feature, claims Afrox, is the high safety factor when the equipment is in use. Preset gas regulators make it easy for even beginner welders. The oxygen port is automatically sealed during welding operations and, as an extra precaution, the gas mixing takes place in the nozzle of the torch, thus eliminating the danger of back-fires.

Portability is made easy by a convenient carrying case, and a range of accessories has been made available at stockists throughout South Africa. Empty oxygen cylinders can be exchanged for full ones at these points and the supplementary LP gas cylinder can be filled wherever gas is sold. Also available is a booklet, compiled by Afrox experts, containing an illustrated guide to brazewelding, brazing, soldering and cutting various metals.

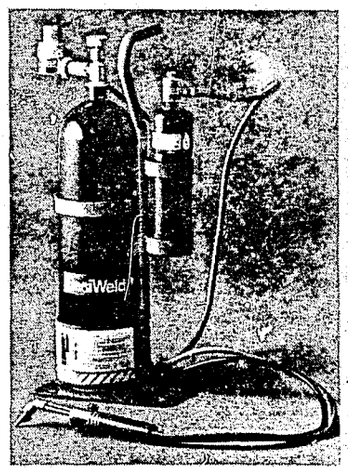
In granting the Saffire LC torch an award in the industrial category, the Design Institute judges said that the design was successful in three important aspects — versatility, simplicity and comfort for the user.

Its versatility is evident from its ability to be used for both welding and oxy-cutting. The change from one function to the other is made by simply changing the nozzle. When the welding nozzle is fitted, it automatically plugs the cutting oxygen port, and even if the welder presses the cutting control button by mistake, this safety feature ensures that no damage would be done.

Other features are screw valves forward of the grip, positioned for easy gas control, and comfort ensured by light mass and a well-proportioned grip.

The Saffire LC torch is designed for use with the Saffire Handipak, which is a new portable brazewelding and cutting set manufactured for light industrial use. Afrox claims that it has innovative technical features which will appeal to the more professional welder and can be used in the workshop and, because of its size and portability, is ideal for outside maintenance work.

A range of nozzles supplied with the set makes it possible to brazeweld steel of up to 5 mm thick and to cut steel of up to 13 mm thick. A special nozzle is available which cuts steel 25 mm in thickness.



KORTLIKS

'n VERVAARDIGER van sweistoerusting, Afrox Beperk, het twee van die sewe Shell-ontwerptoekennings vir 1979 verower. Sodanige toekennings vir nywerheidsontwerp word jaarliks deur die Ontwerpinstituut van die SA Buro vir Standaarde gedoen, in oorleg met Shell SA (Edms) Beperk. Afrox se EasiWeld-gastoestel het in die verbruikerseksie die louere weggedra en die Saffire-sweispyp is in die ingenieursware-seksie bekroon. Albei het reeds byval onder verbruikers van Yskor-staal gevind.

Die EasiWeld-gastoestel is vir die doen-dit-self-geesdriftige, boer en klein onderneming ontwikkel na 'n deeglike ondersoek na die behoeftes van sulke verbruikers. 'n Belangrike voordeel van die eenheid, beweer Afrox, is veiligheid, selfs in die hande van die onervare verbruiker.

Toe hulle die toekenning vir die Saffire-sweispyp gedoen het, het die beoordelaars gemeld dat die eenheid drie kenmerke van goeie ontwerp bevat — veelsydigheid, eenvoudigheid en gemak vir die verbruiker.

Kortliks

SUID-AFRIKAANSE maatskappye wat dit oorweeg om uit te voer, kan gerus kennis neem van die welslae van GEC Woods Fans (Pty) Ltd, van Denver, Johannesburg. Toe die maatskappy besluit het om na Chili uit te voer, is twee jaar toegelaat om die eerste transaksie te verkry, dog dit is binne ses maande vermag.

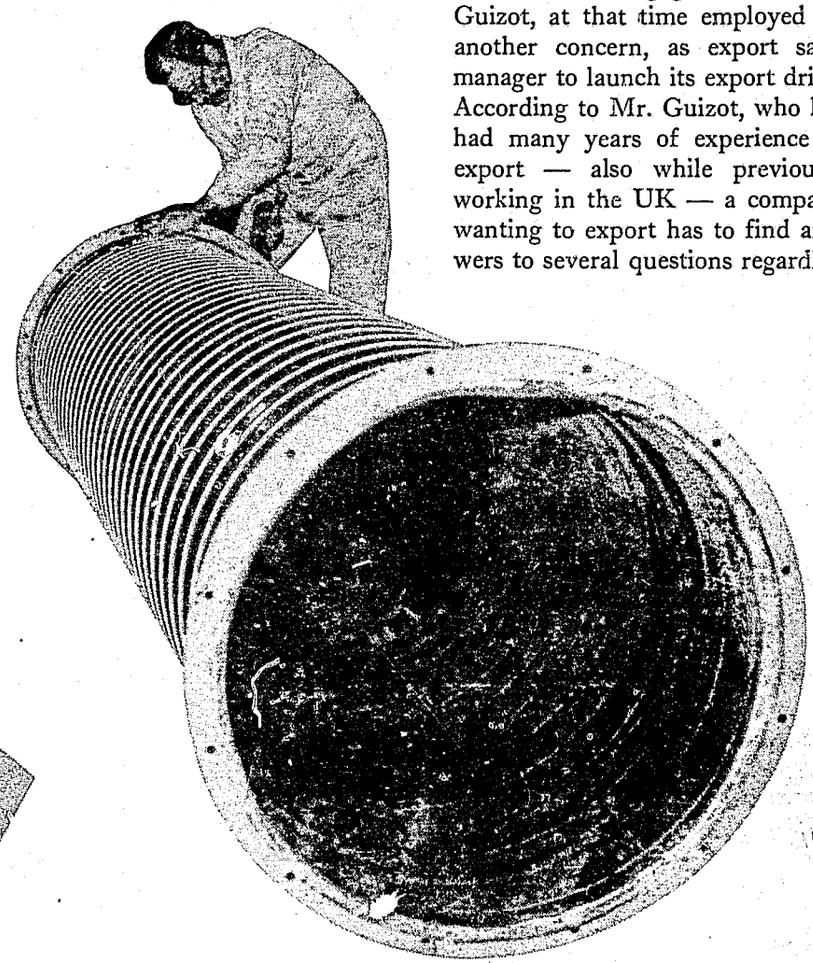
GEC Woods spesialiseer in die vervaardiging van industriële en mynwaaiers, en Yskorfynplaat word vir die omhulsels gebruik. Uitvoerbestellings ter waarde van meer as R200 000 is intussen beklink en die maatskappy is besig om hom verder in die Suid-Amerikaanse mynmark te vestig.

Export market for mine fans

SOUTH AFRICAN companies considering export should take note of the success of GEC Woods Fans SA (Pty) Limited, of Denver, Johannesburg. When the company decided to export to Chile, it allowed itself two years for its first sale, but succeeded in achieving it in only six months. Since then several other sales have followed and more are in the pipeline.

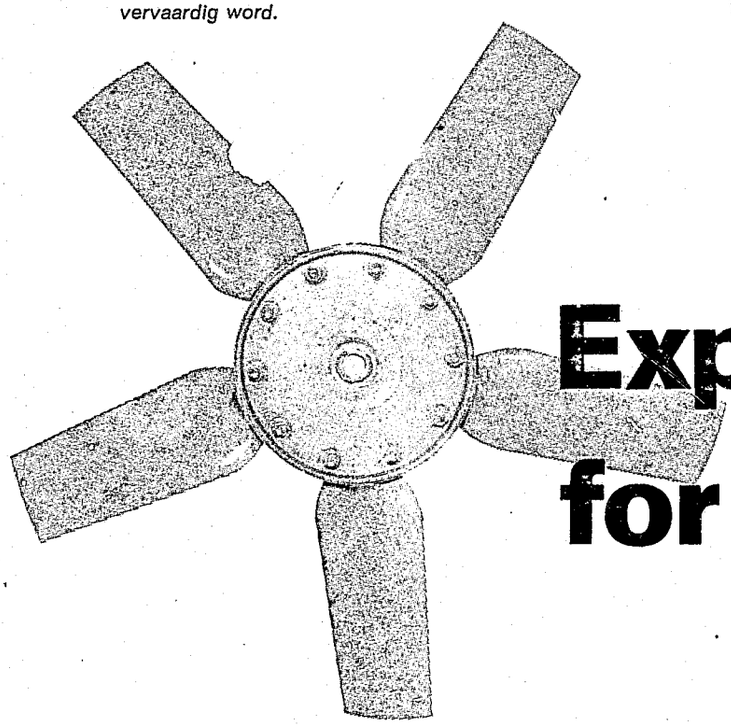
GEC Woods Fans, one of the eight members of the GEC South Africa group of companies employing some 6 000 people and with sales exceeding R200 million a year, manufactures ventilation equipment, using Iscor sheet of various thicknesses for the casings. The motors driving the fans are manufactured by GEC Machines (Pty) Ltd, another company using Iscor steel and currently also involved in export sales promotions.

The group decided in 1978 to become more export orientated, and GEC Woods engaged Mr. Mark Guizot, at that time employed by another concern, as export sales manager to launch its export drive. According to Mr. Guizot, who has had many years of experience in export — also while previously working in the UK — a company wanting to export has to find answers to several questions regarding



A fan duct being manufactured from Iscor galvanized sheet.

'n Waaierleiding word uit Yskor-sinkplaat vervaardig.



An example of one of the types of fan impellers manufactured by GEC Woods Fans.

'n Voorbeeld van een van die tipes waaierstuwers wat deur GEC Woods Fans vervaardig word.

a possible export country, such as: "What is the economic and political situation in that country like? What does it need? What transport facilities are available?

"Should all these factors be in your favour, visit the country and assess the market. If the results are favourable, concentrate all your efforts on doing business there."

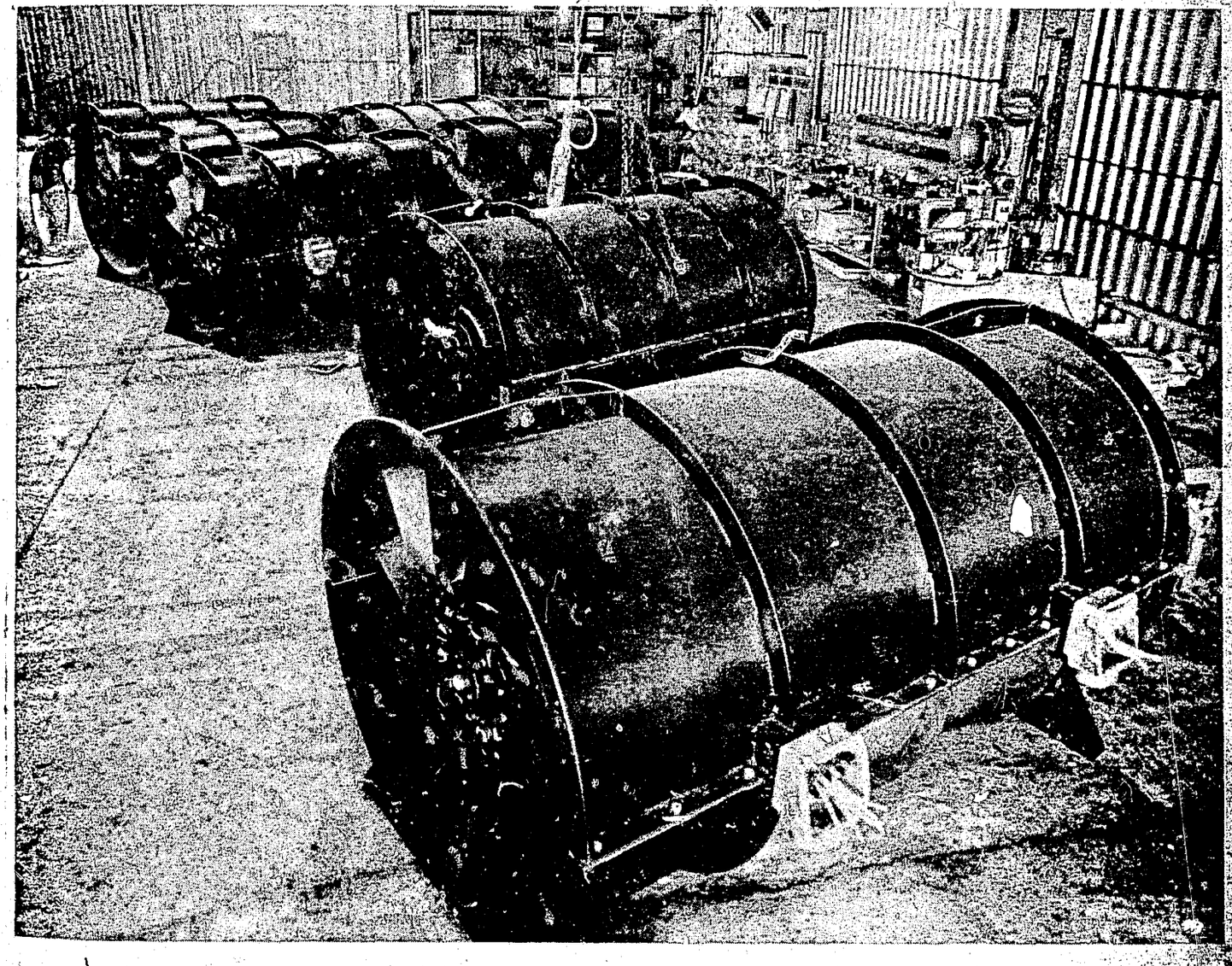
As far as Chile was concerned, he was satisfied with what he had ascertained. He found a strong market for mine fans, as the country is an important producer of copper. He also found that the country was easily accessible from South Africa by sea. Knowing export markets, he did not expect firm results in less than two years. However, within six months of his initial visit, he received the first order. To date, the company's export sales exceed the R200 000

Mr. Mark Guizot, export sales manager of GEC Woods Fans, checking an order for mine fans destined to be exported to Chile.

Mnr. Mark Guizot, uitvoerverkoopsbestuurder van GEC Woods Fans, gaan 'n bestelling na vir mynwaaiers wat vir uitvoer na Chili bestem is.

A quotation for mine fans similar to the ones in the photo has been submitted to a Chilean mining company. The fans in the photo were ordered by a South African mining Concern.

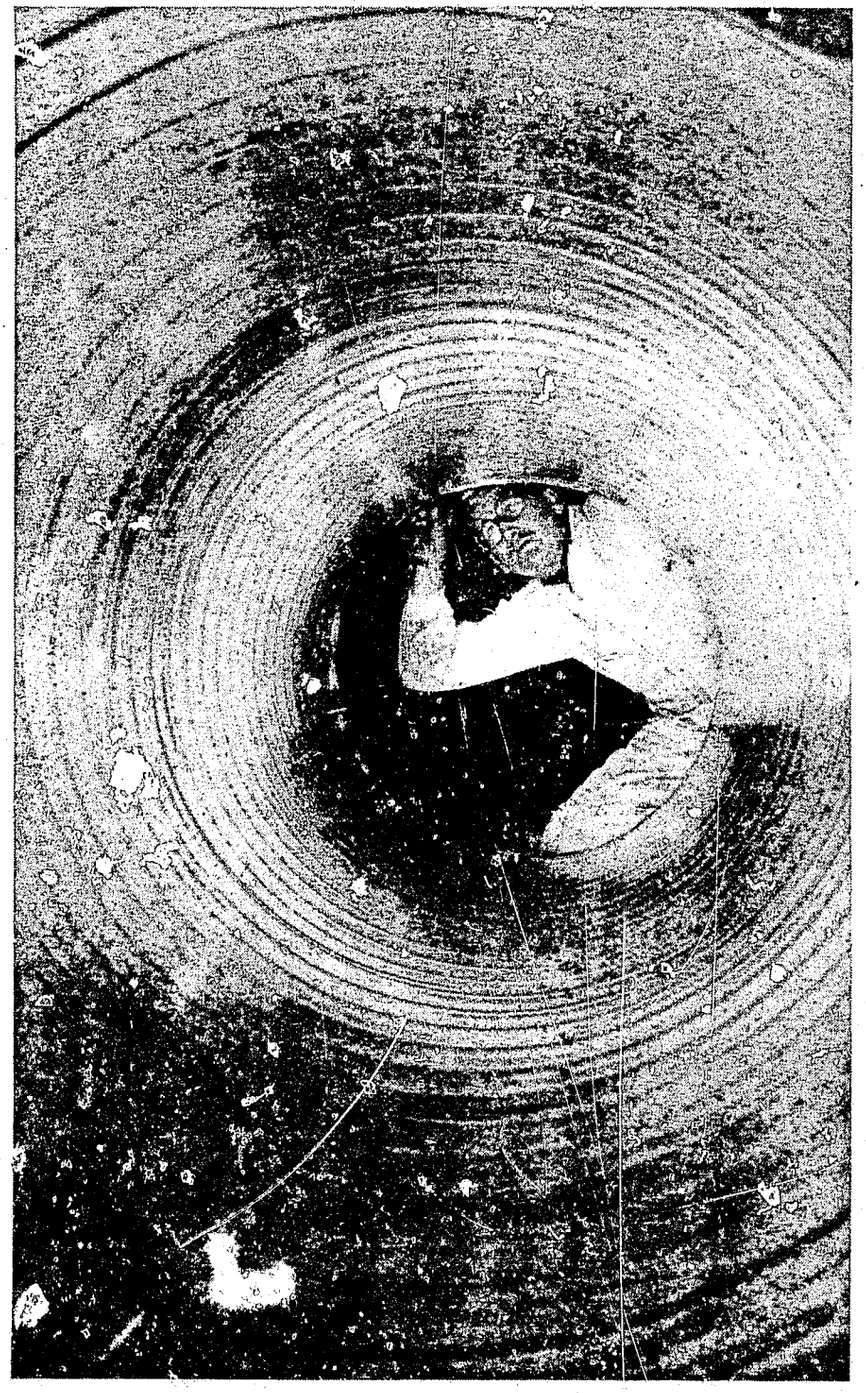
'n Kwotasie vir mynwaaiers soortgelyk aan dié op die foto is aan 'n Chileense mynmaatskappy voorgelê. Die waaiers op die foto is deur 'n Suid-Afrikaanse mynonderneming bestel.



mark.

Last year GEC Woods took part in the Chilean International Trade Fair, and it will do so again in October this year. "Having broken into the market, we now have to establish ourselves firmly in Chile," Mr. Guizot says. In the meantime he is looking at possibilities in neighbouring South American countries, such as Bolivia, which is an important producer of silver and tin.

Although GEC Woods specializes only in fans, the group to which it belongs can offer a package deal to customers, as it covers a wide spectrum of manufacture. GEC Engineering in particular specializes in turnkey projects and offers service of the highest calibre. Other South African companies outside the group have also become involved. The success of GEC Woods Fans has prompted another local company which manufactures small mine locomotives to exhibit at the coming trade fair.



The interior of a fan duct manufactured from Iscor galvanized sheet.

Die binnekant van 'n waaierleiding wat uit Yskorsinkplaat vervaardig is.

Apart from having found the right market, Mr. Guizot ascribes his export success to the products he is offering. These include Airofoil and Varofoil fans which may be staged, making it possible for fans to be added as the mine develops. In this way the initial outlay on fans is lower for the customer and the costs are spread as fan capacity is increased.

Why did the GEC group decide to export? "We felt that South Africa could gain a tremendous advantage if it exported its engineering know-how in the form of finished products. The days when the country had been an exporter of only gold and base minerals are over."

He added: "Unfortunately there is a tendency among certain South African companies to reason that they are sufficiently busy on the local market and therefore do not want to be bothered with something unknown to them. That is the wrong attitude. In the present world economic climate and South Africa's political situation, the country can only benefit from offering its technology to and forging trade links with the rest of the world.

"It is a pity that not all local companies realize this and do not make use of the incentives offered to exporters by the Government. Information about these incentives, which make provision for substantial rebates on income tax, taking into account costs such as overseas fares and accommodation, is obtainable from the Division of Export Promotion of the Department of Commerce and Consumer Affairs, which will also supply the necessary information for assessing the export potential for foreign countries. Our company takes advantage of all incentives to become as competitive in overseas markets as it possibly can."

Weerkaatsing

Gedruk deur Perskor, Doornfontein, Johannesburg

THE SOUTH AFRICAN IRON AND STEEL INDUSTRY

A SURVEY COMPILED BY

W. P. J. BAARTMAN

ISCOR — MARKETING STATISTICS

JULY 1975

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THE SOUTH AFRICAN IRON AND STEEL INDUSTRY

I. A BRIEF HISTORICAL SURVEY OF IRON- AND STEEL-MAKING

I.1 From Pre-Historic Times to the end of the Middle Ages.

When and where the first iron was discovered, or smelted, and used is not known. Before he discovered it in the earth, man apparently depended on the fall of meteorites of almost pure iron which were beaten into objects of [illegible]rship; and occasionally small, loose pieces of hematite were fashioned into symbols of good luck.

The deliberate mining of iron ores (and incidentally also manganese ore), apparently for purposes other than smelting but possibly for use as tools and/or weapons and red-hued pigments, however, goes back to pre-historic times. The only ancient manganese mine yet recorded is at Chowa near Broken Hill, Zambia, and excavations there showed its rubble infilling to contain crudely flaked mining tools, chiefly of manganese, used as choppers, wedges and chisels, together with hammerstones, perforated stones, upper and lower grindstones, and a single polished stone axe, but no metal objects or potsherds. On the basis of these and other discoveries, Prof. Dart postulated in 1934, the existence of Stone Age mining in Southern Africa.

In 1964, A.K. Boshier conducted trial trenching in workings at the Ngwenya Iron Mine in Swaziland. Sites there yielded flaked stone mining tools similar to those found at Chowa in 1934, and since 1964 many more excavations have been carried out and a very large number of artefacts recovered. Well defined ash levels were also encountered during the excavations and samples of charcoal nodules were sent to the Yale and Groningin Laboratories for analysis and dating.

The dating revealed the surprising fact - which was nevertheless in accord with Prof. Dart's postulations - that hematite had been exploited at Ngwenya at least 28 000 years ago. These analyses also afforded the first dated presumptive evidence that foreign ores and pigments found in pre-historic deposits all over the world were the result of deliberate mining (Reference: Nature, Vol.216, October 28, 1967. p.407).

As far as the deliberate production of iron from ore is concerned, however, it is thought not improbable that iron was produced as early as copper or bronze, and available evidence suggests that in Egypt iron was indeed

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known as early as copper or bronze. The oldest Egyptian texts extant, ca. 3 500 BC, refer to iron, which at this early period was reduced from ores by smelting. However, failure to find iron relics that were produced as early as the other two metals is apparently due to the relatively rapid rate at which iron rusts and disintegrates.

Although in a sense we are still living in an "iron" or "steel" age, archaeologists usually consider it to be the period of a few centuries following the bronze age; that is, when iron or steel implements and weapons began to replace those made of bronze, and rare examples of ornaments of meteoric iron and two cases of non-meteoric iron have been reported in Mesopotamia from Sargon's Palace at Nineveh in Assyria, from levels dating around the year 2 500 B.C.

However, the sequence of cultural development from a Stone Age, to one of Bronze to another of Iron which has been demonstrated in Greece and elsewhere is not necessarly universally true, so that a uniform succession of metal cultures all over the world is not in accord with the facts. What has, however, been established so far is that the first certain developments in iron metallurgy on any scale began in Asia Minor approximately 1 400 B.C., and in Europe in the region of present-day Austria in the 11th or 10th centuries B.C. From the latter region it spread over Europe during two reasonably clearly distinguished periods : the first between 1 000 B.C. and 500 B.C., and the second falling between 500 B.C. and 1 A.D.

It was formerly considered that the Hittites, who under an Indo-Aryan dynasty and nobility controlled most of Asia Minor from about 1 400 B.C. to 1 200 B.C., were the first users of iron implements. This view was based on inscriptions appearing on cuneiform tablets found at Hattusas, their capital.

The deliberate manufacture of iron is, however, more frequently encountered in archaeological remains dating from about 1 200 B.C. corresponding in time to the Aegean migrations of northern peoples into Assyria. These "peoples of the sea" with their superior weapons overran the Hittites during a period of conquest in which Homer's tale of Troy (The Illiad and the Odyssey) was an incident. That these Illyrian speaking peoples, the Phrygian and the Philistines, had iron weapons and kept the secrets of their refining practices to themselves is stated in the Bible: 1 Samuel 13, v. 19-21 and 17, v. 4-7.

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According to various scholars, there are connections between these peoples and certain European cultures and that their original home can be considered to have been somewhere in northern Europe (probably in the present East Prussian - Polish areas), and by some they are also considered to be the oldest iron-producing peoples of central Europe since the word for iron in Illyrian is similar to that of the German term.

In Europe itself, however, the beginnings of an iron-making industry is lost in antiquity as even the oldest mythological sagas refer to iron. For example, Thor, god of thunder is described as riding in the heavens and striking the clouds with his "iron hammer"; and the Wieland legend is typical of the reverence and esteem accorded to smiths.

Whether the discovery of the art of producing and working iron was accidental in that it was a by-product of copper and bronze smelting, or that it was the result of observation and experience, is also not known; but it does appear to have developed gradually wherever easily reducible iron ores were to be found and sufficient wood to yield charcoal. In 1934 an excellent example of a "rennofen" furnace dating from the period between 500 B.C. and 1.A.D. was excavated in Siegerland, Germany. It was in this type of tunnel or lowshaft furnace that the ores, after washing and roasting, were smelted with the aid of charcoal. In time, primitive hand bellows, to supply the air of combustion, must have replaced the natural draft first used. The product of these "Renn fires" was a lump (Luppe) about the size of a child's head, interspersed with slag. The slag was removed by repeated heating and hammering, and the particular article required directly fashioned from the "luppe" stage.

In terms of modern definitions of steel, the material that ancient smelters produced can also be classified as steel, although it is frequently referred to as iron (tools and weapons) and reference is made to the Iron Age. The essential difference between the modern and the ancient product is to be found in its method of manufacture: whereas modern steel-making is by the actual smelting of the ores and is an "indirect" process, the old method was the "direct" one from ore to steel, in which the materials used were never completely fluid.

The iron of antiquity, wrought-iron, was the pioneer of the iron family. When early civilization began to make progress, wrought-iron was made

on the tops of hills where brisk breezes provided the blast, the forest trees supplied the fuel, and large stones were used as hammers. The erroneous belief that fusion is necessary for the extraction of iron is evidently founded on the modern method of iron smelting. The primitive metallurgists did not melt their iron : in reducing the ore to metal enough heat was obtained from the charcoal fuel and the forced draft of a bellows to cause the metal to soften and presently to flow down like semi-liquid paste into the bottom of the furnace. Most of the slag was removed by hammering, leaving a mass of iron. The iron was eventually formed into bars under the hammer, and then worked into the sizes required by the smith.

These early smiths made iron and steel in small pieces which were welded to make pieces of the needed size. The advantage of using small pieces is that the fibres were crossed and interwoven in every possible direction, greatly increasing the metal's tenacity. The old process of repeatedly forging the iron gave it a great tenacity and ductility.

Ironwork, then, was for many centuries practiced by empirical methods, since the properties of iron were not understood or explainable until modern times. Quality and treatment were also enormously dependent upon the experience and sagacity of the individual.

By the time of the "Middle Ages", the bellows were waterdriven and the shaft walls considerably raised to form the so-called "stückofen" (Piece furnace). The material obtained from these furnaces was of similar composition to that from the "Renn fires", but naturally much larger, (known as a wolf) and therefore human muscle power was no longer adequate to forge and handle it. Waterdriven hammers thus came into use.

Better control and more efficient use of the heat generated in yet higher furnaces resulted in the temperatures rising so high that they exceed the melting point of the metal. The iron was thus no longer withdrawn as a tacky lump, but could be tapped in the fluid state. When and where these high furnaces (i.e. blast furnaces) were first operated, has not definitely been established, but it is certain that they were not an accidental discovery, as the extraction of molten metals in shaft furnaces was well known to the lead, zinc and copper smelters.

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This development in 1 300 - 1 400 A.D. spelled the end of the "direct" method of steelmaking. Due to its high carbon content, the iron was no longer malleable, and had, in the opinion of the old smelters, still to be purified. Purification consisted in burning out the foreign substances (C, Si, Mn, etc.) by means of a fire operated with excess air, that is, in a carbon dioxide and oxygen rich atmosphere. This was the application of experience gained with the "Renn fires".

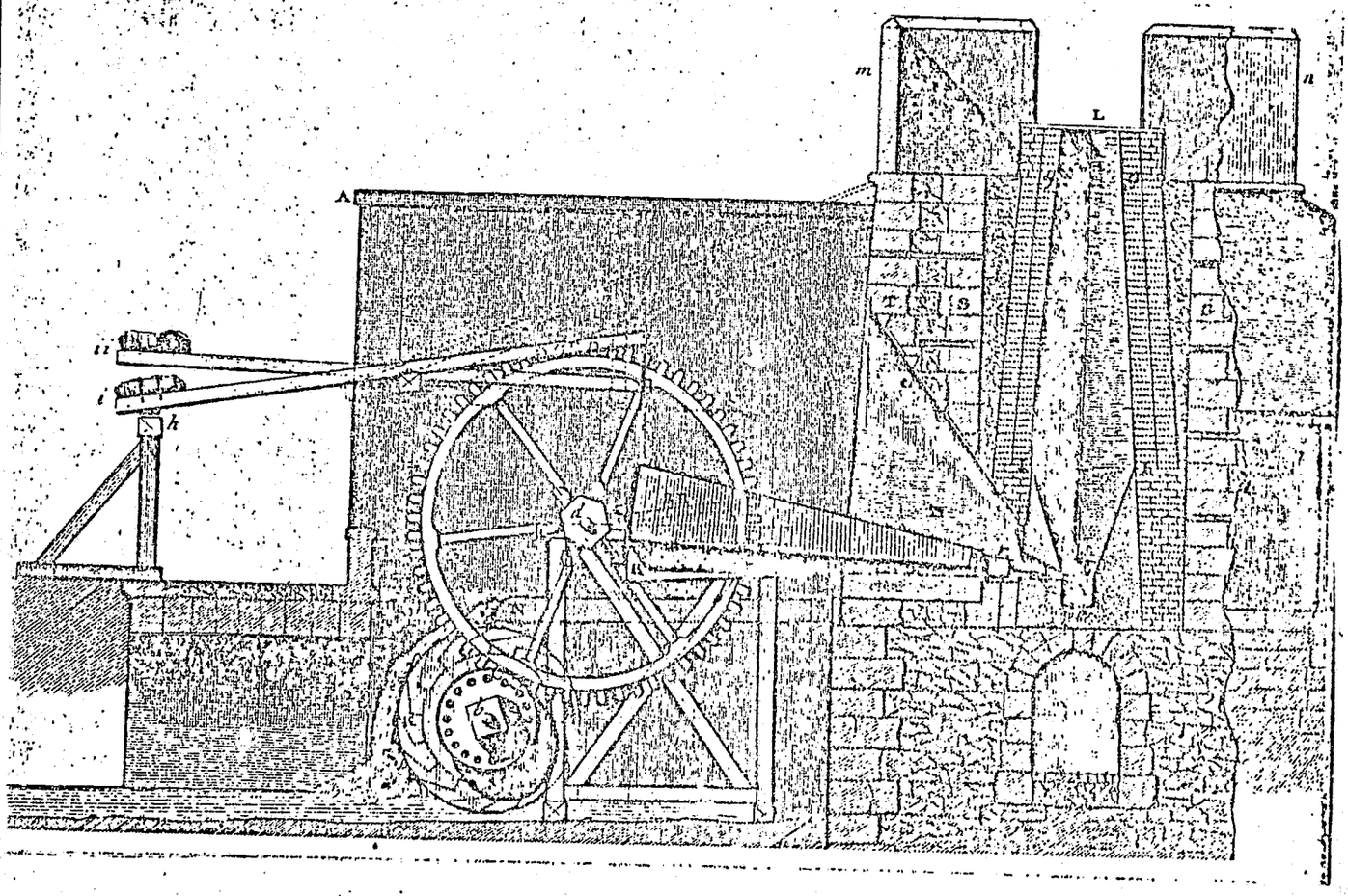
With the method of purifying the iron as practised by the old smelters, the metal thus obtained was low in carbon, and when a higher carbon content or harder steel was required, bars of this iron were packed in boxes and surrounded with charcoal or other organic material, and heated to a high temperature for a considerable time. By a process of diffusion, the carbon penetrated to a greater or lesser extent into the bars, depending on the temperature and time of heating. As can be understood, the penetration or carbonization of the various bars was never quite the same. To obtain a more uniform product, these bars were bundled together, heated and welded together. The bloom thus obtained was forged out into rods again, and the process of "faggoting" repeated. This carbonizing process was known as cementation.

I. 2 The Period After the Middle Ages to the Present

The end of the period in European history known as the Middle Ages (i.e. up to about 1 400 A.D.), also saw the beginning of the end of the use of charcoal as a fuel in iron- and steel-making and the gradual introduction of coke derived from coal as a substitute. The first successful attempts in this direction were carried out in England and occurred during the two hundred year period that preceded the onset of the Industrial Revolution. The use of coal prior to the Industrial Revolution did not, however, ultimately benefit only the future iron and steel industries of England and the European Continent, but resulted in the gradual emergence of a technology based on coal - i.e. it resulted in a broad spectrum of interdependent methods, processes, devices and tools which were to have incalculable social and economic consequences.

A review of the rise of a technology based on coal would then be instructive at this stage since the changes that took place not only illustrate the difficulties that were encountered in changing from an earlier technique to a new technique, but is relevant also to the early attempts (i.e. between 1853 and 1910) to establish an iron and steel industry in South Africa, and the present dependence of several sectors of the Republic's

AN EIGHTEENTH-CENTURY BLAST FURNACE



18th Century Blast Furnace of the charcoal type as illustrated in Diderot's encyclopedia. The height of the shaft was about 7,6 m. (25 ft.). The blast was supplied by a pair of bellows powered by water and blowing alternately. The early coke furnaces were similar in principle and construction but the lines of the interior of the furnace may have differed slightly. A charge of iron ore (washed, dried and pulverised), charcoal and a limestone flux were fed into the throat of the furnace (at L). The furnace was kept full as the charge descended through the shaft, sustained by the outward flare of the boshes, or sides of the furnace. The blast of air rushing up through the descending mass maintained combustion. The charge settled as charcoal was consumed and as iron and slag were drawn off the hearth.

industrial life on coal.

The genesis of the Industrial Revolution is conventionally set in England in the second half of the 18th century. The technological developments usually associated with it are a series of inventions, particularly the steam engine and a number of new machines in the textile industry. The significance of these and similar technical advances made in this period is undisputed; they proved to be powerful instruments, capable of transforming the social and economic order. The inventions of the late 18th century, however, were largely the culmination of an earlier period of technical development, whose history is less well known. The most distinctive characteristic of this earlier technology, which came to dominate British industry in the two centuries that preceded the Industrial Revolution, was the increasingly widespread and sophisticated utilization of coal in industry.

In those 200 years coal replaced wood and charcoal in many industrial processes, among them glass-making and the smelting of non-ferrous metals, whilst the mining of coal itself became an industry of considerable size. And by the middle of the 18th century, this coal technology clearly distinguished the industrial development of England from that of other nations of comparable wealth and culture.

Before the Industrial Revolution began, coal had become almost the sole fuel of British industry, although not all industrial development was related to coal technology. The principal sources of industrial power at the time were not fuels but the horse and wind and water mills; steam did not emerge until after 1700. Moreover, until the late 18th century the connection between the coal-fueled industries and the new textile machinery was tenuous. Nevertheless, coal technology was the most significant and fertile innovation in this period of industrial development. As techniques were invented in order to introduce or extend the use of coal in a particular industry, the same techniques were taken up by an ever widening circle of other industries. As a consequence there emerged in England by the 18th century a large and diverse industrial community bound together by a technology held in common. This technology, based on coal, was the foundation for the accelerating industrial development that began in the late 18th century.

The early importance of coal to the British economy is also illustrated by the fact that almost every British coalfield was being exploited be-

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tween 1540 and 1640. Coal production by the end of the 17th century has also been calculated to have been between two and three million tons a year. This was of a different order of magnitude from that of any other country at that time, and this British superiority in coal output was maintained throughout the 18th century. And whereas in the Middle Ages coal had been employed, where it was available, by blacksmiths, armorers, and some other metal workers; by the 16th century it had spread to coppersmiths, pewterers and gunsmiths, and it was subsequently adopted in wiredrawing. Coal was also being burned on the coasts of England to extract salt from seawater, and was being used in lime-burning.

The manufacture of coke began in the 1620's, when the new fuel was adopted by the brewing industry for drying malt. By the early 17th century coal had entered brick, tile and earthenware manufacture and by the mid-17th century it was being employed in the infant chemical industry in the refining of saltpeter, alum and copperas, in the making of gunpowder and in the boiling of soap, starch and sugar.

The production of glass with coal, which began in 1612, was of particular significance. In glass-making coal was burned in a variant form of the device called the reverberatory furnace, which later played an important role in the growth of several other major industries. These furnaces embodied an arched roof which reverberated, or reflected, the heat of combustion onto the material to be heated. This arrangement prevented contamination by impurities in the fuel and in the glass industry a further measure taken to achieve this end was the enclosure of the glass mixture in a covered crucible.

These advances in coal technology were of great importance to the future of British industrial development, and after 1640 the use of coal continued to spread to new industries and methods for employing the new fuel became increasingly sophisticated. Some of the new developments were simply refinements or extensions of older ones. For example, methods of boiling salt with coal were improved and adopted at inland salt fields. Other new applications required true innovation in techniques or materials.

The manufacture of glass in closed crucibles proved particularly influential, because the method requires fireclay containers capable of withstanding temperatures higher than those evolved in wood-burning furnaces. Once such containers had been successfully fabricated for glass-making they

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subsequently appeared in other industries, where they made new processes possible. For example, by the end of the 17th century steel was being made in covered containers in a closed furnace; and in the 1740's the crucible was involved in another contribution to British metallurgy when Benjamin Huntsman, a clockmaker who was seeking a suitable metal for watch springs, developed a method for producing cast steel in crucibles.

Another significant development was the first smelting of non-ferrous metals in a reverberatory furnace, which was achieved in the 1680's. This was important economically as well as technologically, because at that time England was rich in ores of copper, tin, lead and zinc. By 1702 good brass was being made with coal as fuel.

The reverberatory furnace thus became one of the distinguishing characteristics of British technology by the 18th century, and the advantages it offered led to British superiority in a number of trades. Before 1700 England had taken the lead in clock and watch manufacture, partly because of the quality of the tools available; these included early machine tools. The best files in Europe were also British-made, and England was coming to dominate the production of inexpensive earthenware, which was fired in coal-fueled kilns.

As might be expected, the expanding industrial development of coal led to increased demand for fuel and thereby to improvements and innovations in the coalmining industry itself. The "coal-viewers", or mining engineers became expert in the use of the boring rod to find new seams and turned the railed way into an industrial device of major significance. Perhaps the most remarkable development in mining, however, was the invention of a machine to pump ground water from the mine shaft: the Newcomen engine.

In the first decade of the 18th century there were two revolutionary advances in British technology, both of them associated with coal. One was the Newcomen engine, the other was the first smelting of iron with coke by Abraham Darby. Darby first made iron in 1709 in a blast furnace at Coalbrookdale, having moved there from Bristol. In the latter place Darby had been involved in the brass industry at a time when coke was employed in the reverberatory furnaces that produced the necessary copper. The iron produced in a blast furnace, cast or pig iron, has a relatively high carbon content, is brittle and cannot be worked by hammering like

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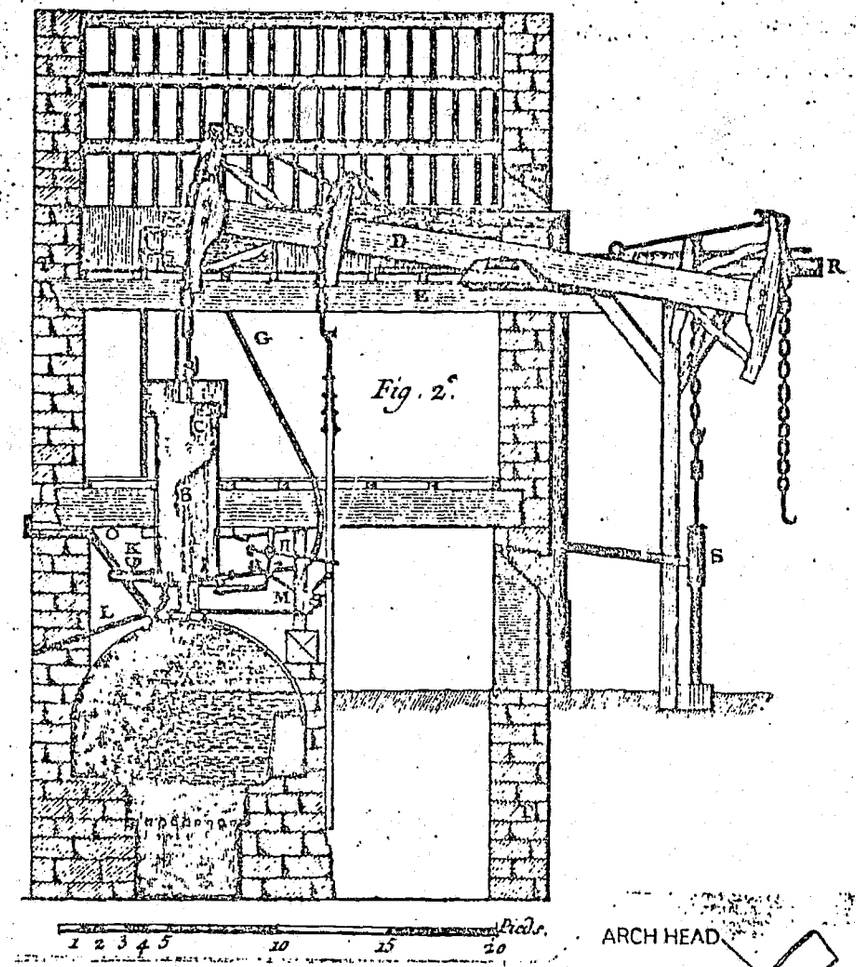
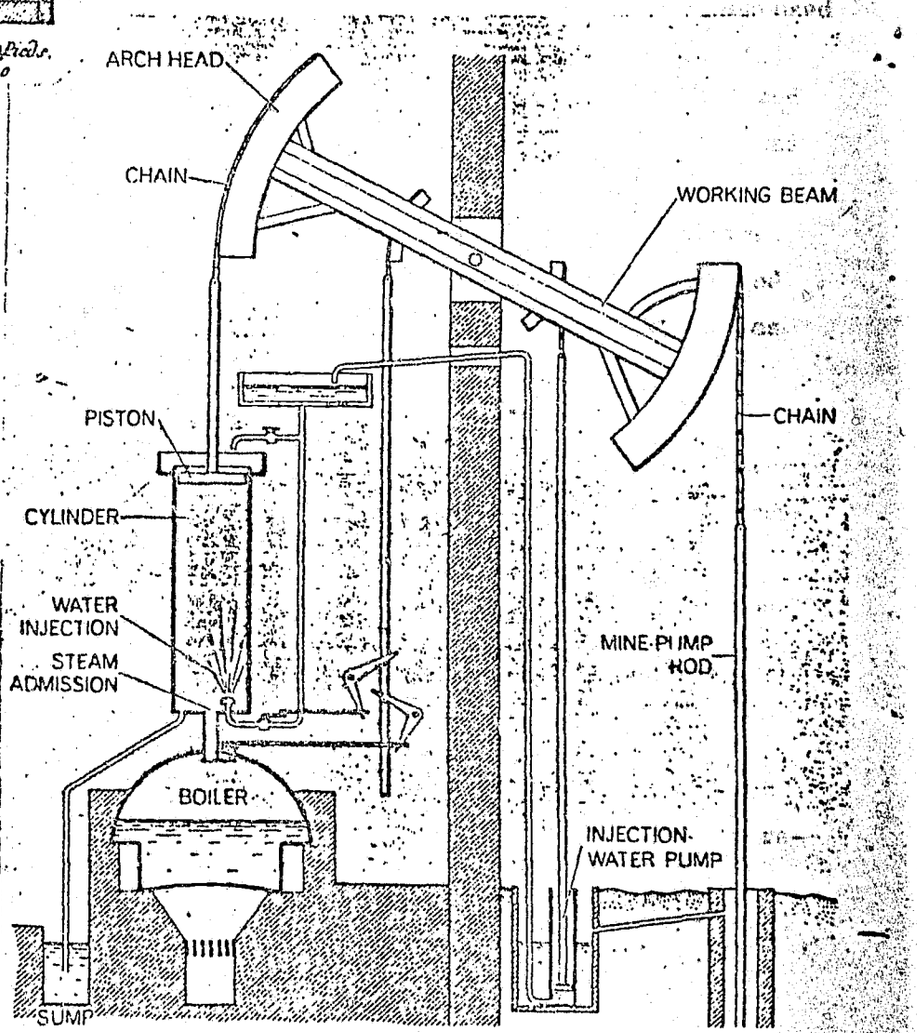
THE NEWCOMEN ENGINE



The steam engine developed by Thomas Newcomen about 1705, was the first practical source of motive power independent of muscle, water or wind. Its first application was the removal of ground water from mines, and it was vital for the growth of mining in England.

Steam was introduced into a cylinder that was then cooled with injection of water, creating a partial vacuum. Atmospheric pressure forced the piston down to achieve pumping; the weight of the mine-pump rod and equipment then raise the piston for a new cycle.



wrought-iron, but it is easily cast.

Although Darby's invention enabled British foundrymen to establish a commanding lead in the production of large castings, the effects of the new technique on the economy and technology of the nation as a whole were of limited consequence for several decades. Unlike most of the pig iron made during the period, which was smelted with charcoal, the pig iron made by Darby's method could not be converted in a forge to wrought iron, the metal most in demand. Darby's discovery was nevertheless a break-through, and an invention which was to be of immense importance in the future.

The steam engine devised by Thomas Newcomen about 1705 is one of the major monuments in the history of technology. It was the first practical source of motive power independent of animal strength and the elements, and it might be compared in importance to the invention of the wheel and axle. In the Newcomen engine steam was admitted to a large cylinder at low pressure and the cylinder was then cooled by injecting water. As the steam condensed it created a partial vacuum and a piston was pushed into the cylinder by atmospheric pressure. The reciprocating motion thus produced was utilized through a rocking beam. The Newcomen engine, which was fueled by coal was adopted remarkably quickly and proved decisive to the continued growth of coal mining and non-ferrous metal mining in England: at least 104 of the engines were built before 1733, and it has been estimated that by the end of the 18th century there were about 1 500 in use, perhaps three times as many as there were engines of the Watt type.

It is perhaps also important to point out here that during the 17th century British technology reversed its position with respect to the rest of Europe. In 1600 England was parasitic on continental technology and was avid to import skilled practitioners; but by 1700 it had come to posses techniques envied on the continent. Although some of the innovations responsible for this change had little or nothing to do with coal, it nevertheless seems clear that the utilization of coal was the line of development with the greatest potential. Not only were the new industrial applications of coal numerous and individually important, but many of these discoveries were related to one another and interlocked to form a cohesive technology based on shared knowledge.

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The introduction of coal in iron smelting provides an instructive example. Although the first success did not come until 1709 and the practice did not become general until the 1780's, the conversion of the iron industry to coal had long been anticiapted. The attempts of Dudley to smelt iron with coal in the 1660's are often cited, and others pursued the same goal. The University of Wales has compiled a list of 22 processes for which patents or licences were issued between 1550 and 1695 for the making of iron by methods that did not employ charcoal, and of these, 19 clearly involve coal.

Most of the early innovators were preoccupied with adapting the reverberatory furnace rather than the blast furnace to the production of iron, and the 1700's has been designated as "a century of effort to apply the reverberatory principle to the making of iron". This general preoccupation is understandable considering the success of the coal-fueled reverberatory furnace in the refining of non-ferrous metals and in many other processes. It should also be noted that the reverberatory method was eventually applied successfully in the conversion of pig iron to wrought-iron. This was by a method called the puddling process, in which the pig iron was remelted and manipulated in a coal-fired reverbatory furnace. The process was invented by Henry Cort in the 1780's.

The experiments in iron smelting attested to by patents and licences possibly represent only a small protion of those actually performed for there can be little doubt that the effort to produce inexpensive iron was carried out almost continuosly throughout the two centuries preceding the Industrial Revolution. Iron smelting, like other industries, was endeavouring to make use of an emerging coal technology and was merely the last major industry to make the essential transition.

As it became clear in many segments of the economy that coal contained the potential of more efficient production and lower costs, industries that had not yet adopted coal looked to those that had made the change most successfully and borrowed and adapted techniques and apparatus already available. Moreover, each industry that switched to coal found it necessary to innovate and to modify existing equipment and procedures in order to accommodate the new fuel. Higher temperatures attained by burning coal, for example, demanded modifications in the design of furnaces and made the need for improved refractory materials urgent.

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Problems of adapting to the new technology were also solved by the exchange of information within and between industries. Information on the varieties of coal suitable for different purposes, for example, was passed from industry to industry. Of particular value was information on which coals could successfully be converted to coke and on methods of making coke. The lack of this information was an impediment to those who first attempted to make coke-smelted iron on the Continent. As the wealth of experience with coal grew and as the battery of devices for its exploitation increased, the difficulties of conversion probably lessened, but innovation and adaption remained necessities. Rarely was it possible to substitute coal for wood without replacing or at least modifying the grate, the furnace, the boiler and the tools used in firing and changing the mode of operation of the men who did the stoking. The need for continual innovation, the premium placed on ingenuity and the success achieved by it must have had a profound effect on the attitude of British industry toward technological change.

To a large extent coal technology during this period evolved on an empirical basis, and changes of considerable magnitude could be introduced by the workmen or artisans. One consequence of this mode of development is that historians have only a very uneven record of how changes came about and of the motives and methods of those who introduced them. Although a tradition of scientific and technical publishing was already established in England, the printed literature pertaining to coal technology is scanty. For example, the most detailed work on the coal industry and its operation was by a Frenchman, J.F.C. Morand.

The appearance of a literature dealing with industrial methods may also reflect not mastery of techniques, but a desire to hasten industrial development by importing techniques from elsewhere. This would explain the relative abundance of literature on furnace industries and coal-mining in France, where the technology itself clearly lagged behind that of England; and in spite of this extensive literature, attempts to transplant British coal-based technology to the Continent had little success until after the Industrial Revolution was well under way.

As was mentioned in the introduction to this discussion, the reason for the failures is not difficult to determine today: by the 18th century coal had created in England a broad spectrum of interdependent methods, processes

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devices and tools, and these could not be exported piece-meal. For example, in order to build the Newcomen engine, one must be able to manufacture large cast iron cylinders; to build the machine tools needed to make textile machinery one must have good tool steel; to make flint glass one needs adequate covered crucibles and the propper furnace. Taking bits of coal technology and trying to establish them abroad was difficult and usually futile; A collection of related technologies had to be acquired at once, together with workers who had the appropriate manual skills.

French attempts to adopt British iron-smelting methods, for example, were repeatedly frustrated, and although a succession of French technologists and industrialists visited various works in England and then tried to reproduce their methods at home, none of the attempts had a lasting effect. Much effort therefore produced little result, and the French industry, half a century behind the British in technique in 1789, dropped further behind by the end of the Revolutionary and Napoleonic wars The most telling comment made on the difficulties experienced in importing technology was possibly made by a French ironmaster who wrote in 1814: "the people who so readily propose the use of mineral coal in place of charcoal do not seem to stop and consider that this implies changing almost everthing in the furnace, the refineries, the workshops, that one has to be situated near mines producing the right kind of coal, to have the ore near the fuel and to train workers in the new kind of process". The problems of acquiring a deeply rooted and broadly diffused technology could hardly be better expressed.

During the 18th century, then, the break-through in the use of coke had been achieved starting with Abraham Darby's blast furnace in 1709, and culminating in Henry Cort's reverberatory puddle furnace in 1784; and although this proto-type of the modern open-hearth furnace was an improvement on the older methods then in existence, it nevertheless still required strong men and plenty of sweat in order to make wrought-iron.

Then, in spite of all the labour and ingenuity expended, matters progressed at a snail's pace for another three-quarters of a century until, in 1858, Henry Bessemer revolutionized steelmaking by proposing to blow air through molten pig iron, and thus converting it into steel, the oxygen in the air oxidizing the elements silicon, manganese and carbon, and resulting in the generation of sufficient heat to raise the temperature of the charge to remain fluid. In some circles, particularly in America, some doubt exists whether Henry Bessemer was the originator of the idea, as patent rights were granted to a certain William Kelly for such a process in 1854.

The Bessemer made it possible to put steel production on a tonnage basis, and therefore the years 1855 - 1860 can be considered to herald the modern steel era. One serious handicap remained, namely the inability to remove phosphorus from the steel by this process. This placed a very big limitation on the type of pig iron that could be blown.

The answer to this problem was found in changing the lining of the vessels from acid (silica type) to basic (magnesite type) materials by Sidney Gilchrist Thomas and his cousin Percy Gilchrist, in 1879. Using a basic lining, lime could be used as a flux to combine with the phosphorus and so form phosphoric acid. Apart from enabling large deposits of phosphorus-bearing ore deposits to be exploited, it produced a valuable fertilizer as a by-product.

Around 1860, Wilhelm Siemens designed an open-hearth furnace for glass melting in which the fire grate was separated from the furnace itself by means of regenerating chambers for air and gas. The possibility of using these furnaces for steel melting was soon seen, and after a few initially difficult years, this type of furnace proved so successfull that up to a few years ago the major portion of the world's steel production was made in open-hearth furnaces.

A few attempts had been made around the middle of the previous century to use electrical energy for melting iron, but without success. As was to be expected, little progress could be made until the construction of large electro-magnetic generators, with large current output at higher voltages was attempted and became a reality. In the year 1898, Emilio Stassano made his first attempt to melt iron ores in an electric shaft furnace, but only met with success in 1902, when he removed the shaft and used it as a remelting furnace.

Heroult took out his first patents in the year 1902, and in 1906 the first electric furnaces for steelmelting, working on the Heroult principle came into operation in the United States of America and Germany. It is hardly necessary to stress the tremendous development in this field during the past 50 years, when one considers that 200-ton furnaces are already in operation.

At present a new revolution in steelmaking has been brought about by the use of oxygen on a large scale in the steel industry. Although Henry Bessemer had pointed out the benefits that could be obtained by the use

of an oxygen-enriched blast, it was not until the 10 years following 1924 that much attention was given to this matter. Most operators were well aware of the advantages that the use of oxygen would bring about, but it was not until Fränkel introduced his compression cycles, that oxygen could be obtained on a tonnage basis, and comparatively inexpensively, from the atmosphere.

We are, therefore, now entering a new era in steelmaking practices.

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II SOUTH AFRICA: A BRIEF HISTORY OF PRIMITIVE BANTU IRON-MAKING; EARLY ATTEMPTS BY THE EUROPEAN INHABITANTS; AND THE BIRTH OF THE SOUTH AFRICAN IRON AND STEEL INDUSTRY.

II.1 THE BANTU IMMIGRANTS.

The mineral industry in South Africa is, of course, of paramount importance in the economy of the country - both as supplier of raw material (ores) to local industry, and as exporter of various ores and ferro-alloys on a large scale. The South African Institute of Mining and Metallurgy has now been in existence for 80 years and it is perhaps appropriate to glance at the historic roles of mining and metallurgy in the economic life of the Republic.

Africa as the Dark Continent, with its fascinating tales of Prester John, Ophir, The Queen of Sheba, and its myths and legends has, throughout the ages, fired the imagination: Pharaoh Necho, 600 years before the birth of Christ, sent an expedition from Egypt around the Cape to probe this strange land; the gold for King Solomon's throne was said to come from Monomotapa - the country now known as Rhodesia. Centuries later the Arabs and Portuguese searched for this mineral wealth. The Arabs found little gold but unfortunately established a lucrative trade in black slaves.

During the closing stages of The Stone Age the indigenous population of the lower portion of the African Continent consisted of the Bushmen, a nomadic hunting people who knew no metals and kept no stock, and the Hottentots who were a pastoral folk with cattle and sheep. Then, somewhere between the 3rd and the 11th century (the exact date is not certain) the Bantu started their long migration southwards and brought with them the knowledge of smelting of iron ore. One of their settlements was in Johannesburg on the Melville Kopje at Emmarentia. These people were the first miners and metallurgists on the Witwatersrand and the well-preserved iron smelting furnace constructed nearly 1 000 years ago is a tribute to their technical ability. This ability to use iron to make better spears for hunting or to fashion hoes for cultivating the soil led to their establishment as a superior tribe. The

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earlier Bushmen were pushed back to the inhospitable swamps and deserts and the Hottentots fled to the south.

The iron so produced by local black Africans was used for both peace and war. The fundamental knowledge of smelting & hammering the sponge metal obtained in these primitive furnaces probably being handed down from one generation to another.

The Bantu also knew the art of copper smelting. In the days of the Dutch East India Company, Hottentots who had probably obtained the metal from northern Bantu tribes brought copper from the north-west Cape to Simon van der Stel; but it took another two hundred years before the white man turned this to advantage.

Stories of the Bantu mining gold spurred the early European hunters to travel deeper into the heart of Africa in search of wealth, and we are told that a Karel Kruger, in 1834, whilst leading an ivory hunting expedition, discovered gold on the Witwatersrand, and took samples to Cape Town; but when he returned with a larger expedition a few years later his party was attacked by Moselekatze's Matabele near Potchefstroom. Kruger was killed and only the legend survived.

As far as South Africa is concerned, then, the manufacture of iron from local sources is much older than the known history of the area: the Bavenda in Transvaal and the Zulu in Natal having left the ruins of their primitive furnaces and workshops in many places.

II.2 THE EUROPEAN SETTLERS.

Permanent European settlement in Southern Africa goes back to 1652, but the first recorded interest in local iron-making occurs only in 1853 - a date which more or less coincides with the first real developments in modern steel-making in Europe.

It is also perhaps for this reason that there is no mention made in the early records of the settlement at the Cape of interest in iron

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smelting : it did not play an important part in the shipbuilding industries of the 16th and 17th centuries and cast iron cannon were only then beginning to replace cast brass cannon.

Thus, apart from iron weapons and tools, an old print of large scale earth-moving operations in 17th century Holland, for example, shows the equipment used to have consited almost entirely of wooden poles and pullies, fibre ropes and woven baskets. Also, old paintings of this period, particularly interior and domestic scenes, show perhaps only an iron bladed knife whereas copper, brass and pewter are much in evidence. In South Africa, with its small white population there was, then, no tradition of large scale, sophisticated smelting and the use of iron and steel products until the advent of the first railway in 1863.

In 1853, Sir Theophilus Shepstone, Governor of Natal, was favourably impressed while watching a Zulu ironsmith working a piece of iron, which he had smelted on a farm in Natal. Shepstone took this piece of iron to the capital, Pietermaritzburg, where a European blacksmith described it as superior to the "best English iron". This iron was sent overseas for further study, while the local patriotic press already heralded the new Sheffield in the valleys of Natal.

An interesting side-light on the use of iron (or steel) by the Zulus during this period has recently come to the attention of the author through reading the journal of the English hunter, William Charles Baldwin, F.R.G.S., who arrived in Natal in 1851. He mentions bartering four iron picks - which he purchased for 1s 6d. each in Port Natal - for an ox from a Zulu. And a little later, involved in an accident with his wagon while crossing a river, he mentions that the load consisted of 3 000 lbs. of picks which he was taking into the "Zulu" country.

One cannot but wonder to what uses the Zulus of those days put the picks - or did their blacksmiths re-work at least some into assegais and battle axes? So one is also constrained to wonder whether or not the piece of iron acquired by Shepstone could possibly have been

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the re-worked remnant of a pick originally imported from England and bartered with the Zulus for some item or other: oxen, ivory, etc.

Further on in Baldwin's journal it also becomes evident that more complex European iron products were not unknown to the Bantu far in the interior of Southern Africa since iron bedsteads appear to have been a popular gift to a chieftain from whom one hoped to gain permission to hunt - particularly elephants - in his area of jurisdiction. Then, too, it has been pointed out that the route followed by Stanley during his epic journey across the Congo while searching for Dr. Livingstone could easily be followed by the vast number of discarded items - again including the ubiquitous iron bedstead - which littered his route. (Reference : African Hunting and Adventure, from Natal to the Zambesi, by W.C. Baldwin. 1852 - 1860).

A few more separate attempts were made to start an iron and steel industry, but in 1882 the latest of these, in that period, also failed. The early promise held out by Natal remained unfulfilled. Meanwhile interest had been awakened in the Transvaal. As early as 1882, A.H. Nelmapius obtained a concession to produce iron, but this, at the turn of the century had not yet resulted in the start of an iron and steel industry. The scene then moved back to Natal where S.L. Green of Sweetwaters produced the first iron by European methods in South Africa and so brought that honour to Natal. This venture, however, did not flourish as anticipated.

II.3 THE BIRTH OF THE SOUTH AFRICAN IRON AND STEEL INDUSTRY

In the Transvaal in the meantime interest had not flagged, and was stimulated by the impetus to industrial development which resulted from the growth of the gold mining industry and the discovery of coal in the Witbank area.

In the railway yards of the Transvaal meanwhile scrap had accumulated and became such a problem that the Government of the day had to start thinking seriously how to deal with it. Their efforts and the interest displayed by other Government departments received great stimulus from "A memorandum re the Iron and Steel Industry", published in 1909 by the Government mining engineer, R. Kotze.

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In this he recommended the manufacture of steel from scrap with the ultimate aim to smelt local ores as well. Tenders were called for to use this scrap for the production of steel.

At this stage the two British colonies and the two former Boer Republics merged into Union, and the new Government accepted the tender of H.H. Wright who, however, had insufficient financial backing to carry out his palns. Wright then approached Sammy Marks who eventually took over the concession and established the Union Steel Corporation (of S.A.) Ltd., (Usco), at Vereeniging. This is one of the independent concerns that came into existence before Iscor, and is still doing very valuable work today. In 1913 the first steel was poured by Usco from a ten-ton open hearth furnace.

About this time a Pretoria engineer, C.F. Delfos, was energetically pressing on separately with his own plans. In 1909 he formed the Pretoria Coal, Power and Iron Syndicate to mine coal on a farm North of Pretoria, generate electricity for Pretoria and develop the iron ore deposits on the farm. The disappointing quality of the raw materials, however, prevented success.

Delfos resisted pressure from his associates to tender for the railway scrap. He was firmly convinced that the only hope for ultimate success lay in an industry based fully on local raw materials starting with iron ore. He felt that basing the venture on the smelting of scrap would seriously delay the real development of a fully integrated industry which he had as his ideal.

He then turned his attention to the quartzitic iron ores on the Pretoria Townlands and established the Pretoria Iron Mines, Ltd. In June, 1918, his small blast furnace was blown in. After some setbacks the furnace had by 1921 produced over 4 000 tons of pig iron. Further steps were now necessary to proceed on a larger and more economic scale.

Meanwhile Marks had already expanded his steel-making capacity at Usco during the early years of the First World War, when this steel was particularly welcome to the country. By 1916 Marks began attempts

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to implement the early understanding that the smelting of steel from railway scrap should lead to an industry based on indigenous raw materials. He formed the Transvaal Blast Furnace Company, Ltd., whose blast furnace was blown in at Vereeniging in October, 1918, a few months after the furnace of Delfos at Pretoria. After producing about 700 tons of pig iron it met with serious technical difficulties. But this experimental furnace had satisfactorily added further proof of the feasibility of smelting iron from local raw materials.

A third pioneer, J.K. Eaton, was independently busy with the same problem. He had formed the firm Cartwright and Eaton, Ltd. at Benoni in 1911. This was the forerunner of the present Dunswart Iron and Steel Works, Ltd., also one of the independent firms in existence before Iscor started. Eaton decided to build a blast furnace of 120 to 140 tons per day capacity at Newcastle in Natal, and formed the Newcastle Iron and Steel Works, Ltd. Construction started in 1919, but it was only in 1926 that the furnace which, in the meantime, had been acquired by Usco was blown in. It may be mentioned at this stage that the Newcastle plant was subsequently taken over by the African Metals Corporation, Ltd., and subsequently by Iscor.

On this site today there are three producing blast furnaces (nos. 2, 3 & 4) producing various grades of ferro-manganese for the local market and also for export, foundry iron, and liquid iron for steel making. Blast furnace no. 1 represents a historic remnant of the original Newcastle furnace.

These pioneers had also investigated many possible sources of raw materials. Delfos, in particular, had obtained options and had also acquired some valuable deposits of iron and manganese ores, coal and dolomite. A large number of specialist studies and reports, both local and overseas, had also been made.

By 1920 the bulk of the pioneering work had been done. Experiments had successfully proved the technical feasibility of a local iron and steel industry. It now needed the business interests to develop and put to use all these results. In this the problem was the quest for capital.

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Here Delfos again was indefatigable. In 1920 he founded the South African Iron and Steel Corporation, Ltd., which took over his earlier Pretoria Iron Mines, Ltd. With all his reports on the technical and commercial prospects of his scheme he approached British and Italian steel firms at various times, but time and again negotiations failed. Usually the overseas firms insisted that the South African Government should guarantee principle or interest or even both; or their proposals entailed impossible conditions which were far too onerous to risk.

Marks, who died in 1920, and his partner Lewis had hoped to develop their firm by small accretions as they had done since 1913, whereas Delfos had always maintained that the real industry should be launched only as a fully integrated economic unit of at least 150,000 tons annual capacity.

In the depression of the early twenties Lewis, however, recognized that an early major step was necessary if a sound industry was to be established. He, therefore, also embarked on a quest for capital, also approaching some of the steel firms in Britain previously contacted by Delfos. The firms in Britain were now aware of three independent parties in South Africa pursuing the same goal, namely Delfos of Pretoria, Lewis of Vereeniging and Eaton of Benoni and Newcastle. In Britain an amalgamation between these three was suggested. The three agreed to negotiate. A relatively minor result was achieved in that Lewis took control of the Newcastle Iron and Steel Works, Ltd.

Two schemes had already been rejected when a third was envolved which the South African parties were able to accept. It merely remained now for the interests in Britain to arrange the finance. Unfortunately, this venture again failed and still no real progress had resulted.

Meanwhile conviction had grown that mining and agriculture alone could not carry the economy of the country. A virile industrial development was essential, and this at an appreciable pace.

The first World War had exposed the extremely vulnerable position of a relatively infant industrial development without a well

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established local iron and steel industry.

The Government showed its awareness of the immediate need of a strong basic iron and steel industry. To stimulate private enterpreneurs it passed the so-called Bounties Act in 1922 to encourage the establishment of such an industry. It promised the payment, to any company with a capacity of at least 50 000 tons per annum, of R1,50 per ton for every ton of pig iron made from local raw materials, and also R1,50 for every ton of steel produced from local materials. This rate would continue for three years. Thereafter the amount would gradually reduce to nought by 25c per ton in every succeeding year.

This Act, however, did not have any obvious effect and the German firm of Gutehoffnungshuette was requested to investigate and report on the feasibility of producing iron and steel from local raw materials. It sent out a commission to study the proposition. Their report was ready in 1924, and confirmed the favourable prospects of an iron and steel industry. Delfos seemed to have achieved ultimate success as the Gutehoffnungshuette themselves were interested in participating in the venture and proposed terms which Delfos's Corporation considered very acceptable. It seemed that at last private investors were prepared to start a fullscale industry. But the French occupation of the Ruhr intervened and caused the Gutehoffnungshuette serious losses at home so that once again success evaded Delfos.

With the support of this German report he again tried to interest British steelmakers, but once more with no success - even though the Bounties Act was still on the statute book.

Meanwhile there had been a change in Government from that of Prime Minister Gen. J.C. Smuts to that of Prime Minister Gen. J.B.M. Hertzog. A new Government had advanced industrial development as one of its vital political platforms. It was also very conscious of the extremely unsatisfactory economic situation and of the urgent need for a strong local iron and steel industry as a basis for further industrial development. But the Government was not yet completely

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convinced that the matter could not be left to private enterprise.

In due course, however, it became apparent that steps taken so far had failed too often and that some sort of Government assistance was now necessary. On the 30th of March, 1928, i.e., about four years after the Gutehoffnungshuette Report, a Joint Session of both Houses of Parliament passed the Iron and Steel Industry Act (No. 11 of 1928). Under this Act the South African Iron and Steel Industrial Corporation. Limited (Iscor) was established, but it was not to be an industry run as a State Department. The principle of joint ownership between State and private enterprise would be applied. It was clear that a really economic industry could stand up to world competition only if it had an annual capacity large enough to bring about the necessary low costs of production.

The authorized share capital of the Corporation, namely £3,5 million, was divided into:

(a) 500 000 ordinary shares of £1 each ("A" shares) to be subscribed by the Governor-General from funds to be appropriated by Parliament for that purpose. These shares are not transferable except by Act of Parliament and entitle The Governor-General as holder to a number of votes which shall exceed by one the total number of the votes of all the other shareholders in the aggregate.

(b) 3 000 000 ordinary shares of £1 each ("B" shares) to be offered for subscription to the public at not less than par.

However, an apathetic public took up only a small proportion of the "B" shares and it was decided to amend The Act to allow the Government to subscribe for the remainder.

The establishment of ISCOR in 1928, then, brought to an end an era of about 75 years during which repeated efforts were made, unsuccessfully, in both Natal and Transvaal to found a viable iron and steel industry based on local raw materials : iron ore, coking coal, lime-stone, dolomite, etc. The first 92 500 tons steel, converted in 1934 at ISCOR's Pretoria Works, from pig iron produced from Thabizimbi iron ore introduced the next phase in the development of a South African Iron and Steel Industry.

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ISCOR : PRODUCTION OF STEEL - PRETORIA AND VANDERBIJLPARK 1934 - 1973
(x 1 000 m.t.)

YEAR FINANCIAL	PRETORIA	VANDERBIJLPARK	TOTAL
1934	92,5		92,5
1935	303,4		303,4
1936	261,7		261,7
1937	300,9		300,9
1938	312,7		312,7
1939	320,2		320,2
1940	287,6		287,6
1941	295,9		295,9
1942	342,3		342,3
1943	425,9		425,9
1944	471,9		471,9
1945	471,9		471,9
1946	523,9		523,9
1947	552,5		552,5
1948	580,3		580,3
1949	605,2		605,2
1950	545,5	86,5	632,0
1951	549,6	406,3	955,9
1952	580,4	482,8	1 063,2
1953	551,4	574,3	1 125,7
1954	600,0	687,6	1 287,6
1955	635,3	696,5	1 331,8
1956	635,8	752,7	1 388,5
1957	693,5	801,7	1 495,2
1958	743,1	836,0	1 579,1
1959	737,0	848,7	1 585,7
1960	943,1	1 066,2	2 009,3
1961	981,3	1 105,6	2 086,9
1962	1 024,4	1 220,2	2 244,6
1963	1 149,8	1 350,9	2 500,7
1964	1 183,1	1 405,6	2 588,7

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1965	1 205,8	1 385,9	2 591,7
1966	1 211,4	1 646,6	2 858,0
1967	1 360,9	1 834,6	3 195,5
1968	1 358,5	1 991,5	3 350,0
1969	1 371,2	2 013,7	3 384,9
1970	1 365,0	2 113,4	3 478,4
1971	1 284,8	2 531,5	3 816,3
1972	1 350,1	2 702,6	4 052,7
1973	1 351,9	2 677,6	4 036,5ϕ

ϕ Includes 6,958 metric ton from Newcastle.

III: THE SOUTH AFRICAN ECONOMY AND THE IRON AND STEEL INDUSTRY

In order better to understand the role that the iron and steel industry, and ISCOR in particular, plays in the South African economy, a brief historical summary of the Republic's economic development and the salient features of the contemporary economic scene is given below. In attempting such an historical summary, use can conveniently be made of W.W. Rostow's* five stages of economic growth. These, adapted to South African circumstances can be deliniated as follows:

III.1 Stage 1:

Rostow defines first of all a "traditional economic community". This definition describes fairly accurately and adequately the economic condition of the various earlier nomadic hunting and pastoral cultures (the Bushmen and the Hottentots), and the more settled pastoral tribal life of the Bantu, which had apparently existed more or less unchanged since time immemorial. As was mentioned in the historical introduction, it was apparently only certain of these tribes - the Bavenda in Transvaal and the Zulu in Natal - who had a knowledge of primitive ironwork and used this knowledge to produce a limited range of tools and weapons. Owing to the nature of their primitive techniques, however, little progress towards a larger output of iron could be expected or indeed was possible.

With regard to the European settlers at the Cape, and despite the fact that most had their origins in the relatively advanced agricultural economy of the Netherlands of the "Golden Age" (ca. 1600 - 1750), and were officials and servants of the mercantilist commercial empire of the Dutch East Indies Company, the daily life of the hunters and farmers can also be described in terms of Rostow's first stage. This stage in South Africa can conveniently be said to have lasted from 1652 to about 1803, that is, up to the years of control and influence by Governor Janssens and Commisioner De Mist, and immediately prior to the English take-over of the Cape.

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* Vide : W.W. Rostow, The Stages of Economic Growth (A Non-Communist Manifesto).

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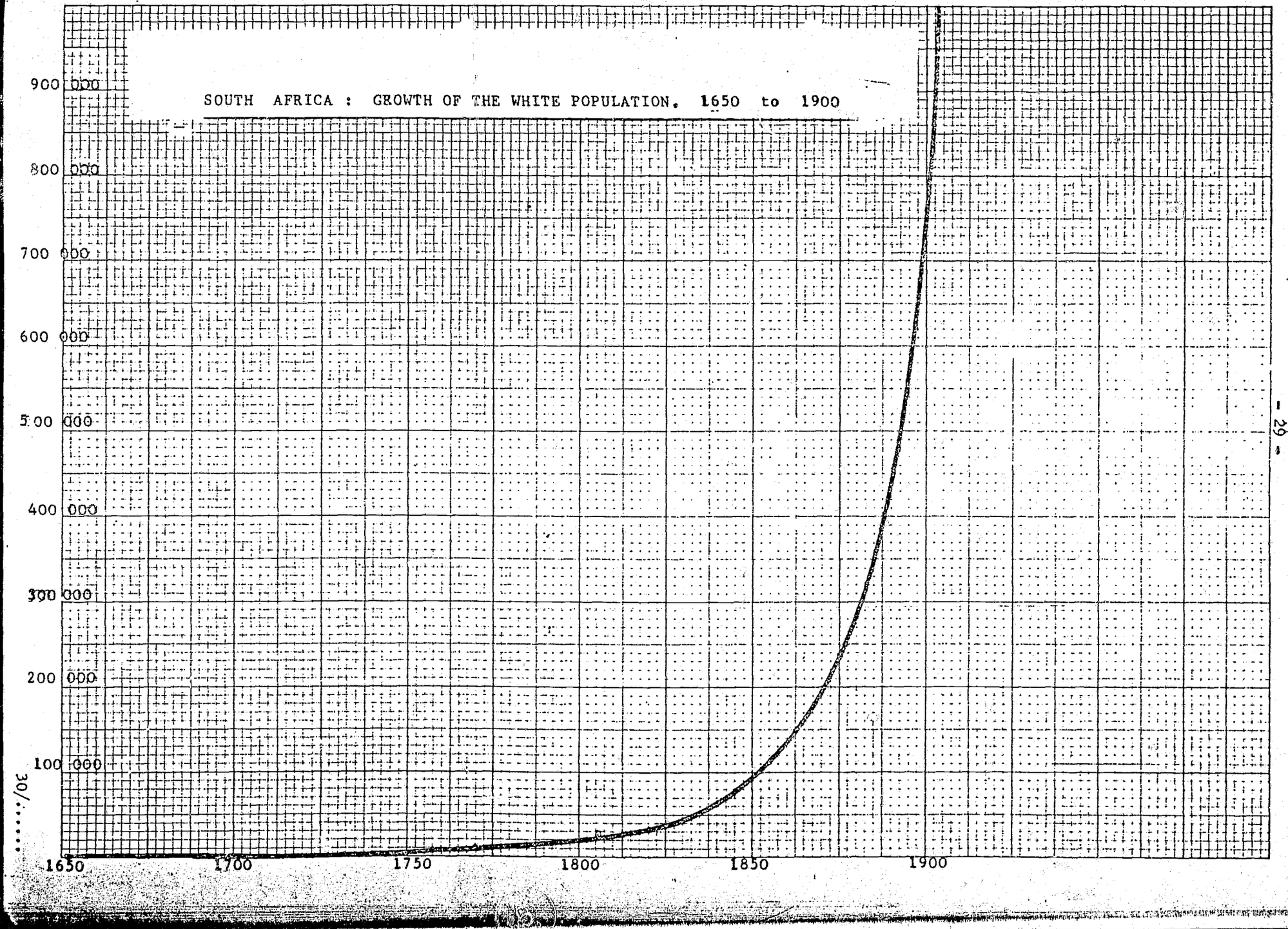
Also, with respect to the white population, this had only increased from van Riebeeck's original garrison and labour force of about 80 men to about 26 000 persons by 1803 (with an equal number of slaves and Hottentots as servants and labourers). Apart from a lack of tradition in iron working, this small community was not only largely self-sufficient in a primitive sense but were also spread over a relatively large area. The Fish River had been proclaimed the eastern boundary by Governor Van Plettenerg in 1778, and the Third Kaffir war in 1799 had already introduced a pattern of instability which was only to end with the self-destruction of The Xhosa in 1856 and the Ninth Kaffir War in 1877

All in all, therefore, there were neither the conditions which could lead to the establishment of a viable, local iron and steel industry nor, apart from such basic items as tools, weapons, and possibly wire and nails, a potential import market for more sophisticated iron and steel products. And in any case, the commercial production of steel in sufficient quantities to form the basis of a modern industrial economy was still sixty years away in Europe itself.

III.2 Stage 11 :

Following on the first stage of the traditional economic community, Rostow defines a "preparatory" stage in the economic life of a community which precedes the stage wherein the economy begins to "take-off" towards sustained development. As far as South Africa is concerned, and although the dating of the final phases of this preparatory stage can be the subject of much discussion, it will be assumed here that it lasted from about 1803 to about 1933, that is, up to the period of the Great Depression and prior to the outbreak of the Second World War. The first decades of this stage under British Administration and with the South African economy linked commercially to England, witnessed the development of various aspects of the agricultural sector, particularly the wine industry, the breeding of sheep for the export of wool, and also the export of hides and skins.

The middle decades, from about 1867 with the discovery of the first diamonds, till about 1886 with the opening of the Witwatersrand goldfields, are important for several reasons : the first railway line, from Cape Town to Wellington was built between 1859 and 1860, the railway linking


SOUTH AFRICA : GROWTH OF THE WHITE POPULATION, 1650 to 1900
900 000
800 000
700 000
600 000
500 000
400 000
300 000
200 000
100 000
1650
1700
1750
1800
1850
1900

30/.....

Port Elizabeth to the diamond fields was built by 1874, the first railway in Natal by 1876, the railway between Cape Town and Kimberley in 1885, and the railway from the Cape to Johannesburg, over Bloemfontein and with connections to Port Elizabeth and East London was completed by 1892. The development of railways in South Africa was important not only in establising this essential element in the country's infra-structure, but was to have an important bearing on the eventual establishment of an iron and steel industry in South Africa. By 1900, the railways had expanded to 3 500 open miles and to 13 200 open miles by 1933. At present the S.A.R. administers 13 905 miles (22 248 km.) of railway lines.

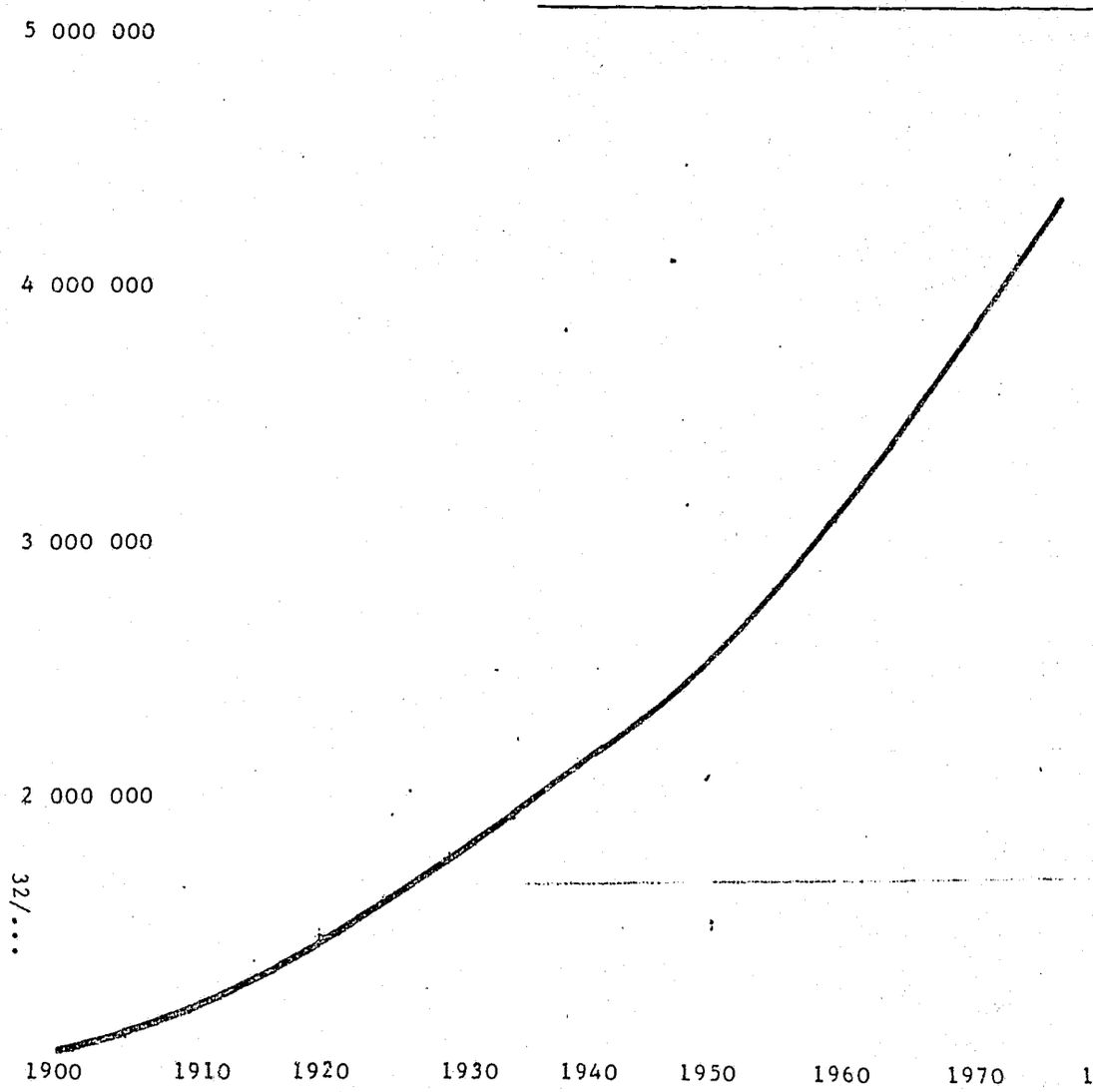
As far as the white population is concerned, this had increased to only about 100 000 by 1850, and only reached this number as a result of relatively large-scale immigration, for example the 5 000 1820 Settlers and other small groups mainly from Germany during the 18th and 19th Centuries. After 1850, and with the discovery of diamonds and gold, the white population, as can be expected, increased rapidly and passed the million mark in 1900, to reach the two million mark by 1933. It therefore took approximately 250 years (from 1652 to 1900) for South Africa's white population to reach the million mark, but only 75 years to add a further $3\frac{1}{2}$ million by 1974.

Perhaps an historical comparison would not be inapt here in order to put South Africa's relatively slow development in better perspective. In the United States of America, apart from the resident white population of about 10 million in 1820, 3 million immigrants fleeing the miseries caused by the industrial revolution entered America from England and Ireland alone between 1830 and 1850. By 1850 America's population had reached the 23 million mark and by 1900 the 90 million mark. Between 1840 and 1850, 6 000 miles of railroad were added to the existing mileage which reached approximately a quarter of a million miles by the 1930's.

Also, by 1850, the United States was already relatively industrially developed, with numerous iron foundries operation, partly owing to the British naval blockade of American ports during the war of 1812-1815, which acted as a spur to the development of American self-sufficiency.

To return to South Africa, the middle decades of the preparatory stage also witnessed numerous attempts to establish an iron and steel industry in Transvaal and Natal. In 1853 occurred the recorded incident during which the Governor of Natal, Sir Theophilus Shepstone, witnessed a Zulu smith at work.

SOUTH AFRICA : GROWTH OF THE WHITE POPULATION. 1900 to 1970



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As a result of Shepstone's interest an English syndicate was formed, also in 1853, which sent a mineralogical expert to Natal and who reported favourably on the mineral resources and the prospects for establishing an iron and steel industry in that colony. Nothing, however, came of this, but given the conditions then obtaining in the colony, and the relatively undeveloped technological stage of iron and steel manufacture in Europe itself, this was to be expected.

Ten years later, also in Natal, a certain M.. Smith attempted to obtain a concession to build a railway and to exploit the local coal and iron ore, but again to no avail. Then, in Natal in 1882, a prospectus of the South African Iron and Coal Company made its appearance, and in the same year in Transvaal, A.H. Nelmapius obtained a concession to produce iron. Both these attempts to establish an iron and steel industry again failed to lead to the realization of the hopes of the men involved.

Then, in 1901, S.L. Green built a small blast furnace, on the European model, at Sweetwaters in Natal and produced two tons of pig iron. By 1905 he had built a second blast furnace which produced a little more than 10 tons of pig iron, and in the same year in Transvaal J.G. Anderson established the Transvaal Iron and Steel Company Ltd., but with no positive results. In 1905, however, the Government railways of Transvaal, the Central South African Railways, (CSAR) concerned by the growing accumulation of scrap at their Pretoria yards, produced a small quantity of iron from local ores but did not pursue this project further.

In 1909, the then Government Mining Engineer, R. Kotze (later Sir Robert) published a "Memorandum re the Iron and Steel Industry", and this was followed in 1910 by F.W. Harbords' report on the possibility of producing steel in the Transvaal. As a result of these reports the CSAR called for tenders for the smelting and/or production of steel from the accumulated railways' scrap. The successful tenderer was H.H. Wright who, with the financial backing of Samuel "Sammy" Marks, established the Union Steel Corporation (USCO) in 1911, and in 1913 the first steel was tapped.

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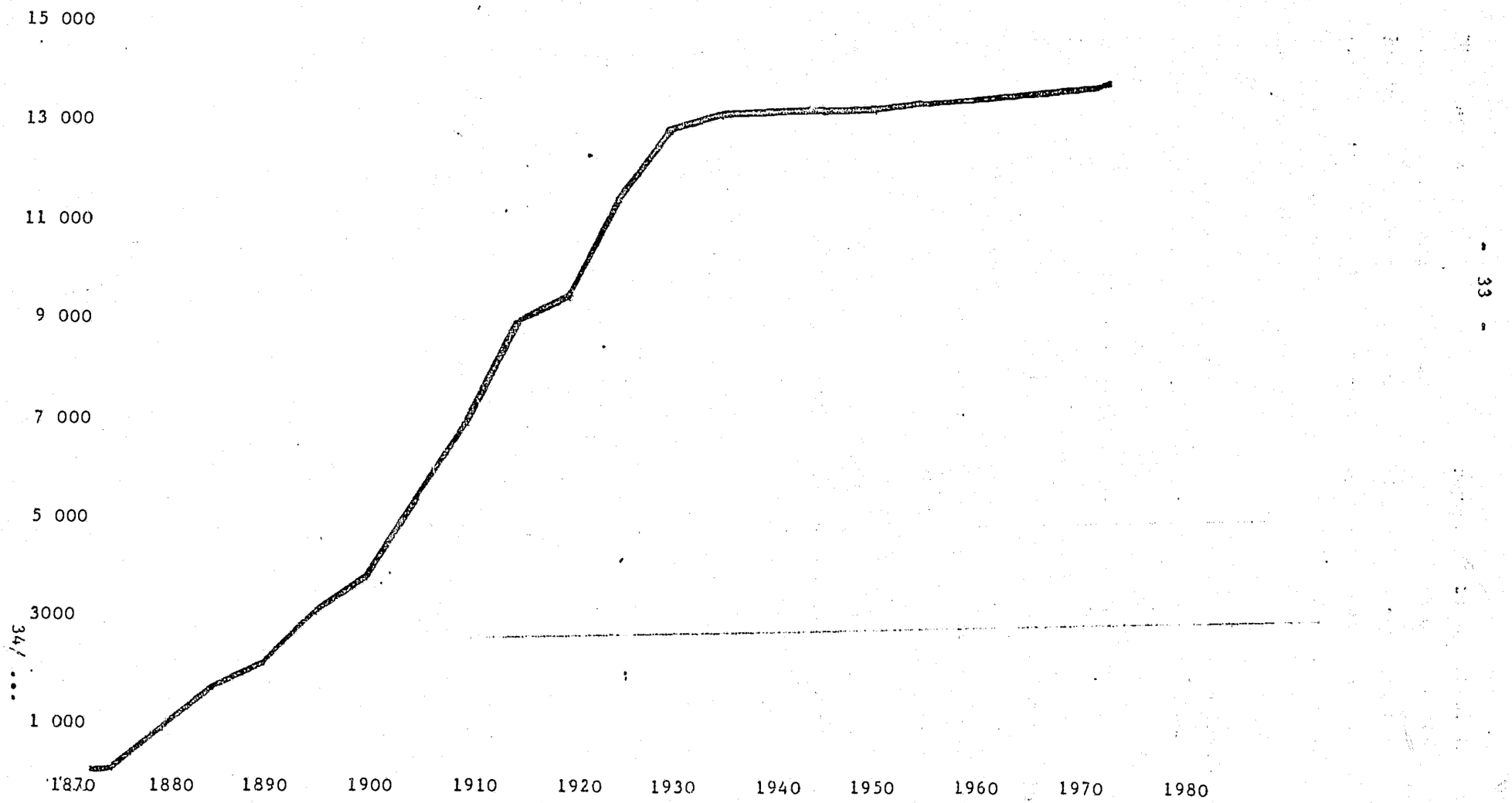
SOUTH AFRICA : DEVELOPMENT OF THE RAILWAYS SYSTEM.
OPEN MILEAGE, 1870 to 1973.



USCO, and the years 1911-1913, then, represent the birth of the iron and steel industry in South Africa. The tonnages produced were, however, small and the early history of USCO was more often than not one of a series of crises engendered by war and depressions. The first Official Year Book of the Union of South Africa, covering the years from 1910 to 1917, records:

"There are signs that the interest taken in South African iron deposits is gradually increasing. A few attempts have been made to prove some of the deposits and a little actual smelting of iron has been done. With high working costs and a limited market there did not until recently seem to be any prospect of an iron industry for many years to come. The continued shortage of supplies of iron and the high price due to the war have, however, put a new complexion on the case, and the starting up of works smelting iron from local ore is under serious consideration at present. Two establishments, at Vereeniging and Boksburg, for the working up of scrap iron have been in successful operation for some years and have proved of great utility in the general scarcity of steel and iron." A more detailed description of the role that USCO has played in the development of an iron and steel industry in South Africa is included further on in this report.

A general idea of the economic development of the country during this preparatory stage can also be gained from looking at certain export/import figures. For example, imports increased from £3,2 million in 1862 to £30,3 million in 1905; and exports from £2,1 million in 1862 to £36,3 million in 1905. Gold valued at £20,7 million and diamonds valued at £6,7 million were the most important exports in the latter year.

III.2.1. CUSTOMS TARIFF: IRON AND STEEL.

Some sections of the customs tariff of South Africa, established by Act No. 36 of 1925, and amended by subsequent Acts, are given hereunder and are an indication of the range or iron and steel products imported prior to ISCOR coming into production:

Tariff of Customs Duties

Class V - Metals, Metal Manufactures, Machinery and Vehicles.

122. Iron and Steel -

(a) In blocks, ingots, billets, slabs, blooms and like crude manufactures ; and scrap.

(b) Plates and Sheets: Plain, corrugated or galvanized, including plates coated with lead, tin or zinc but not including lacquered, enamelled, varnished, printed, lithographed or embossed.

(c) Angle, bar, channel, rod, H.T., and similar iron or steel but not perforated or put together or worked up in any way or marked for working, and baling clips and fluted mild steel not cut to size.

(d) Drill steel.

(e) Tool steel

(f) Hoop iron and hoop steel, shaped or fashioned for cooperage.

(g) Metal parts of steel window frames and rolled steel sections, other than those provided for in paragraph (c) for the manufacture of steel window frames.

(h) Hoop, plain or perforated, and box strap.

(i) Shovel plates, shaped but otherwise in the rough.

Maximum duty on most of these iron and steel items was 3%, except in the case of window frames where duty amounted to 15% - clearly a move to protect such production as was then being rolled in South Africa. Item (i) which came in duty free is also of interest reflecting the importance of shovels in agriculture and mining.

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III.2.2. IMPORTS

Imports of iron and steel into the Union between 1911 and 1929 also shows the influence that the First World War had on these important industrial materials.

Table: Imports of Iron and Steel 1911 - 1929

Year		Value (£)
	1911	815 109
	1912	946 529
	1913	946 275
	1914	648 531
	1915	639 454
	1916	975 575
Average	1915 - 19	1 033 545
"	1920 - 24	1 862 471
"	1925 - 29	1 949 213

The importation of manufactured products of iron and steel during these years is also revealing with respect to the general conditions then prevailing.

Table: Imports of Manufactured Iron and Steel Products.

Year	Value (£)				
	Machinery Agri., Elec., Mnf. Mining, Printing	Fencing materials	Hardware & Cutlery	Wire Rope	Railway & Tramway Material (incl. Locos)
1911	3 002 452	519 166	1 557 364	115 773	206 064
1912	2 741 090	457 374	1 679 162	100 697	190 989
913	2 887 858	593 542	1 704 241	119 354	308 110
1914	2 555 331	356 621	1 320 811	103 664	234 725
1915	1 929 762	112 843	1 067 245	83 041	172 378
1916	2 195 830	81 722	1 432 431	138 431	138 856
AVERAGE:					
1915 - 19	1 900 109	145 021	1 662 437	138 848	
1920-24	3 696 582	821 530	3 279 827	220 921	3 144 363
1925-29	3 982 314	928 408	3 788 687	240 339	3 439 200

There are several points of interest in these statistical data: for example, bearing in mind that prices were increasing rapidly during the First World War, the increased values of imports from 1916 onwards do not necesseraly reflect any increase in the volume or tonnage of imports. Secondly, the diminution in the imports of fencing and other wire products is a reflection of the importance these steel products were playing in the new era of trench warfare. The latter period of the stage II preparatory period, particularly from about 1920 onwards, is however of greater importance and

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although the economy as a whole was not yet capable of self-sustaining growth, it was during these years that the gold mining industry developed into the power-house of the economy. By 1909, for example, 8 763 602 oz. of gold were being exported to a value of £32 159 603 (out of a total value of mining industry exports of £38 960 796), and the tonnage and value was increasing year by year.

Several important infra-structural steps were also taken by the Government and the private sector during this period. For example, the Electricity Act No. 42 of 1922, which brought ESCOM into being, was promulgated; and the future existence of ISCOR was assured by Act No. 11 of 1928. Apart from this, various cement factories had been built or came into production in 1892, 1913, 1916, 1921 and 1927; and by 1935 local cement production had reached the 470 000 m.t. level.

As far as the iron and steel industry is concerned, this latter phase saw C.F. Delfos' persistence rewarded with the establishment of ISCOR and with the first 92 500 m.t. steel tapped in 1934; J.K. Eaton's establishment of Cartwright and Eaton Ltd. (later Dunswart Iron and Steel Works Ltd.) in 1919, and Newcastle Iron and Steel Works in 1920. His first blast furnace at the latter works was in production by 1926.

III.3 Stage III :

According to Rostow's definitions and criteria, after the preparatory stage, the third stage occurs during which the economy "takes-off" into self-sustaining growth. In South Africa it can be accepted that this stage more or less coincided with the end of the Great Depression of 1929 - 1933 and the end of the Second World War (1945-1946). Chararteristic of this period was that the necessary infra-structure was further expanded and the following is a brief list of the legislation promulgated before or coinciding with the end of the war :

(i) The Industrial Development Act No. 22 of 1940; amended by Act No. 27 of 1942. The Industrial Development Corporation was, of course, to play (and still plays) an important part during the post-war years in the development of South Africa's industrial sector.

(ii) Two housing Acts, No. 49 of 1949, and No. 45 of 1945, later consolidated as Act No. 10 of 1957.

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(iii) The Natural Resources Act No. 51 of 1947, amended in 1955..

(iv) Twenty-three other Acts between 1923 and 1947, relating to the commercial and industrial sectors.

Apart from these governmental steps, the devaluation of the South African pound in 1933, with a beneficial influence on the gold mining industry can be mentioned, as well as the commissioning of ISCOR's first three blast furnaces in 1934, 1936 and 1942 with a total joint production of 3 800 712 m.t. of pig iron by the end of World War II.

The final phases of Stage 111 lead to Stage IV wherein a country grows to "economic maturity", and in South Africa's case it can be accepted that this is the economic stage in which the country finds itself at present. Rostow's fith and final stage is that of high mass-production and consumption. South Africa, of cours has not yet reached this final stage.

To return to the "take-off" stage : By 1945 cement production had doubled the 1935 figure to reach 945 000 m.t., and many other industries such as K.O.P., the plastics industry, a wire cable manufacturer and SAPPI had been brought into existence. Also, in 1944, the first surveys and fieldwork which would eventually lead to the Orange River Project (first officially considered in 1928) were begun.

By the end of World War 11 it can, then, be assumed that South Africa had essentially passed through Stage 111, the "take-off" stage and had entered the first phase of its growth to "economic maturity". It is also perhaps useful to note certain generally accepted economic indicators operative in 1945-1946, and to compare these with current levels.

	1945-46	1973
Per capita steel consumption	77 kg.	217 kg.
Per capita cement consumption	83 kg.	300 kg.
Per capita electricity consumption	730 KwH	1 961 KwH

However, before discussing in greater detail the various economic phases the country has passed through in the decades since 1946, it is perhaps

useful first of all to consider, as background, certain aspects relevant to the iron and steel industry in general.

III.4 The Iron and Steel Industry

In view of the composite structure of the iron and steel industry, the following factors should, at the least, be borne in mind, and also that the following remarks apply generally to steel industries in almost all industrialised countries :

III4.1 Supply vs. Demand

Whereas the long-term theorectical demand curve for steel is more or less a straight line, the long-term supply curve, by virtue of the very nature of steelmaking (capital intensiveness), is graded in steps. With the coming into operation of new or additional capacity, and other things being equal, a certain amount of "over-capacity" is created over the short to medium-term. But "other things" seldom remain equal and therefore sporadic shortages or surpluses do occur each with a shorter or longer duration. Remarkable as it may seem, steelmakers and consumers of steel often disagree amongst themselves, or cannot really decide on what the actual position is at various points of time. Lacking up to date statistics on overall stock positions, particulars of end-consumption, and the rate and amount of imports and exports, a certain amount of uncertainty, especially in regard to prevailing and short to medium-term market conditions, is always present. Pronouncements on supply and demand situations are quite often subjective and thus biased according to individual experience.

A few examples can be quoted to illustrate this :

(i) Partly as a result of certain projects, a temporary shortage in the domestic supply of certain steel products occurred during 1965. Large tonnages of steel had to be imported to supplement domestic resources. By agreement, Iscor handled these imports on behalf of all other domestic manufacturers and consumers. Particulars of tonnages required were submitted to Iscor who in turn ordered the stipulated tonnages from overseas. Shortly after these imports had been made, a marked slackening in domestic demand manifested

itself. It then appeared that, almost to a man, everybody who had placed orders from overseas had actually over-ordered in order not to be caught short of supplies. These excess stocks, therefore, first had to be absorbed before domestic demand conditions returned to "normal". Graph No. A illustrates this in terms of steel consumption.

(ii) International supply and demand conditions in the world iron and steel industry also exert a strong influence on South African domestic conditions. Whenever there is an international shortage, and high prices therefore obtain on the world market, local manufacturers and merchants tend to enter the export market thus creating domestic shortages. Conversely, when overseas demand is slackening, overseas exporters tend to export (inter alia) to South Africa, often at dumping prices, thus increasing or creating domestic surpluses.

(iii) A comparison, on a total tonnage basis, between (domestic) installed capacity and apparent domestic consumption must be approached with circumspection because the composition of demand varies from time to time. This can be seen in Tables to

(iv) Conditions of apparent or actual shortages at times tend to be even further activated by the advancement of ordering levels in anticipation of longer delivery periods. By the same token, a certain amount of "stocking-up" can also be expected during times when price increases are expected.

III.4.2 Technological changes

(i) It is an interesting phenomenon that in the early stages of the industrialization of countries a bigger tonnage of profile type products is consumed than flat type products. With increasing industrialization the consumption of profile products and flat products, respectively, move to a point of equality (South Africa would seem to be approaching this phase), after which the consumption of flat products increasingly gains the upper hand.

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(ii) Like other products, steel is also susceptible to competition from substitute products, e.g., other metals, plastics, nylon, concrete and fibreglass. In the competitive struggle, steel products, by virtue of their capital intensive origin, in many instances are not as flexible as substitute products.

III.5 THE PAST-WORLD WAR 11 PERIOD

Should Rostow's definitions and criteria be accepted for the purpose of this discussion, and with Graph No. in mind, it can be said that here we have to do with the final stages of Stage 11, or the preparatory stage with Stage 111 or the "take-off" stage, and with the initial decades of Stage 1V or the stage during which relatively gradual but nevertheless sustained growth towards economic maturity takes place.

As was mentioned above, the initial phases of Stage 1V more or less coincided - for comprehensible reasons - with the end of World War 11. A glance at the first three decades of Stage 1V, i.e. since 1946/47, also shows that the South African economy exhibits reasonably clearly distinguishable phases or periods.

III.5.1 The Period from 1946/48 to 1957/58

Closely related to a period of war, or other abnormal and violent times, and forming a powerful but initially latent element in the economy, is that of supressed inflation. This form of inflation is "suppressed" by price controls and regulations, by rationing, etc., during the war; but, after the end of a war when these controls are lifted - usually also for political reasons - inflationery spending is triggered off. Suppressed inflation also implies the existence of redundant money and a potential demand for goods which, if unleashed, would create active inflation. This redundant money can accumulate in an industrialised country during war time partly as a result of heavy Government spending and budgetary deficits, and partly in the form of post-war credits; for example, payments that will be made to returning soldiers - if their country was on the "winning" side. In South Africa, in the immediate post-war phase, the numbers of returning servicemen were augmented by relatively large-scale immigration, mainly of skilled workers.

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In a suppressed inflationary condition, and one that not only implies credits to be paid out after the war, but will also be accompanied by the usual post-war governmental pratice of creating extra paper money, it is easy to see that, without strict controls, the inflationary situation could become endemic. By the end of World War 11 there was in South Africa, then, an accumulated demand for all sorts of goods and services - a situation paralleled, of course, in South Africa's traditional suppliers - and substantially more money in circulation. These conditions, together with an increase in the prices of imported products, and a local production level which could not keep pace with demand, led to a sharp increase in prices in general. This post-war inflationary period (except for a brief recession in 1948) lasted more or less till the end of the Korean War in 1953.

It can be noted, however, that this post-war inflationary period was beneficial as far as the country's industrial and construction sectors were concerned since it held out the promise of increased profits to entrepreneurs.

The period of relatively high economic growth in South Africa in the post-war years was, then, accompanied by a relatively high rate of inflation which varied from 5% to 10% per year, and is also reflected in the increase in the Wholesale Price Index which increased by 50% between 1947 and 1952. This period can also then be viewed in terms of a classic inflationary condition brought about by too much money chasing too few goods, i.e. the "demand-pull" form of inflation of the economists.

As far as the iron and steel industry was concerned, this period also witnessed important expansion : the first two blast furnaces were commissioned at the Vanderbijlpark Works (in 1950 and 1952), and the No. 4 blast furnace at the Pretoria Works in 1958. ISCOR's crude steel production consequently tripled from 524 000 m.t. in 1946 to 1 579 000 m.t. in 1958. Imports of steel products also began to increase after the low levels of the war years, and soon reached the 422 000 m.t. level in 1948, and 549 000 and 536 000 m.t. in 1951 and 1952 respectively. After 1952 imports tended to decline somewhat as total production increased rapidly by 6,5% per annum between 1946 and 1958.

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In general, however, it should be mentioned that, although South Africa was one of the countries with the highest economic growth rate in the first decades after World War 11, owing to an unbalanced or divergent growth pattern of demand, this rapid growth was not spread uniformly over all sectors of the South African economy.

Taking into account, then, the local conditions that preceeded the "take-off" stage when, prior to 1933, the country was largely dependent on agriculture and mining, and the changes which took place during the Stage 111 "take-off" period between 1933 and 1946, it can be seen that the South African economy underwent important structural changes after 1946, the most important being the increase in the relative importance of the secondary industrial sector - especially manufacturing and construction.

These structural changes in the economy are reflected in Table No. where can be seen that manufacturing and construction increased their contribution to the GDP from 19% in 1946 to 28% in 1972, whereas agriculture and mining declined from 25% to 21% over the same period. The mining sector, for example, had to wait for the devaluation of the South African £ in 1949, the development of the Orange Free State and Western Transvaal gold fields, the exploitation of uranium resources, and latterly the substantial increase in the price of gold and other mineral prices, before this sector could, once more, begin to recover lost ground.

The role of industrial development in the economic growth of South Africa during this period is also reflected in the increase in the number of industrial undertakings and the growth of the labour force. For example, at the outbreak of World War 11 there were 8 614 industrial enterprises with a labour force of 236 000 active in the country. By 1945 these had increased to 9 316 enterprises and 361 000 workers; i.e. an increase of 8% and 53% respectively. By 1954-55, however, the industrial census showed 13 725 enterprises operative with a labour force of 653 000, i.e. an increase of 47% and 81% respectively. The relative importance of this sector is also high-lighted by the increase in the value of manufacturing production: R663,9 million in 1945/46 and R4 044,8 million by 1963/64, i.e. an average annual growth rate of 10,6% compared with

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the 8,3% growth rate in the GDP (at market prices).

And so, indeed, one could cite various sectors of the economy during this post-war phase all of which would supply evidence of strong, self-sustaining economic growth, and as good an example as any is that afforded by the increase in the electricity generated and consumed in the country: from 3 308,6 million KwH in 1933/34, to 8 328,5 million KwH in 1944/45, to 22 308 million KwH in 1958/59.

After 1948, and especially during the first years in office by the National Party Government, political factors could also be said to have played a discernible role in the economy, notably as a restrictive influence. On the other hand, with the perspective given by distance in time, it can also be said that, possibly, the economy needed a "breathing space" after the period of abnormally strong growth immediately after the war. The cement industry can, perhaps, be used as an example here : after the building of several cement factories in the 1930's, no new cement factories came into production until 1947-49, and thereafter again not until 1960-64. Cement production figures reflect this relative decline after 1950. The increase in cement production between 1945 and 1950 was such that by 1950 production was 815 000 m.t. higher than in 1945. Between 1950 and 1955, however, the rate of production declined and production in 1955 was only 540 000 m.t. higher than in 1950. A further decline in the rate of production occurred during the next five years and it is only when the period 1960-65 is reached that the rate of production increases substantially once more, viz. 1 000 000 m.t. a year more after 1965 than in 1960.

III.5.2 The Period 1957/58 to 1962

During the 1950's both the agricultural and mi[illegible]ectors once again experienced a period of progress. The GDP Def[illegible]as exceptionally low, varying between 0,23 and 2,34% between 1954 and 1962, whilst the Wholesale Price Index increased by only 10% during the same period. As far as the mining industry was concerned, the advantages accruing from the 1949 devaluation and the other factors mentioned above now became apparent.

The period between 1957/58 and 1962/64 was, however, in both a political and economic sense, a difficult one. For various reasons there was an exodus of foreign capital (especially during 19 -61). In international affairs, the accession to independence by various African States, uncertainty as to the future of the Federation of Rhodesia and Nyasaland, the outbreak of fighting in the Portuguese Provinces, as well as unrest among sections of the non-white population of South Africa itself, created an atmosphere that was conducive neither to economic confidence nor to optimism with regard to the future of Southern Africa.

During this period consumption of electricity nevertheless increased considerably; and apparent steel consumption increased from 2 103 000 m.t. in 1958 to 2 390 000 m.t. in 1962, with ISCOR's share amounting to 1 579 000 m.t. and 2 244 600 m.t. respectively. Cement production was likewise increasing and had reached 2,7 million m.t. by 1960.

III.5.3 The Period After 1962

By 1962 there were, once more, favourable trends to be observed in the economy. In the international sphere a four-year period of recession ended with beneficial effects on South Africa since these international developments of course always exert an influence on the "open" South African economy with its strong import-export propensities. Between 1963 and 1968 there also occurred the longest, sustained period of economic growth since the end of World War II among South Africa's more important trading partners.

From 1965 onwards, this period of economic growth was further stimulated by America's far more active participation in the Vietnamese War. In South Africa itself there was, after 1962, a return to an atmosphere of greater economic confidence and political stability in the country largely as a result of Governmental action to maintain law and order.

This renewed confidence was further enhanced by the inherent strength of the economy which had already given evidence of such strength in the years between 1946 and 1958. However, where economic growth during this latter period could be attributed to factors such as the strong post-war demand for goods and services, devaluation and the influx of foreign capital, the

period after 1962 is characterised rather by economic growth stimulated to a greater extent by factors at work within the domestic economy itself. Important aspects of this are the following :

i) A strong, sustained increase in demand for durable goods and for housing by all sections of the population. Satisfaction of these demands has also contributed to the substantial increase in the general standard of living of considerable sections of the total population which increased from 11,3 million in 1945 to nearly 25 million by the end of 1974; i.e. the population more than doubled in thirty years.

This increase in demand and in the rate of consumption and the increase in total population is reflected, inter alia, in developments in the building and construction industries, the development and expansion of new townships, the development of high-rise buildings, and the construction of free-ways, bridges, dams, tunnels and other irrigation projects and the expansion of the generation and consumption of electricity and much else. The supply of steel, whether as reinforcing material, beams and girders, window framing, and the sheet, plate and profiles supplied to manufacturing and assembly industries, of course, plays its essential role in all these developments.

(ii) An increase in capital investment; i.e. an increase in building and in the acquisition of buildings, machinery and equipment in order to increase production whereby growing local and export demand can be catered for. With the development of the manufacturing sector diversification occurred with both forward and backward linkages to the primary sectors (especially agriculture and mining) and not only leading to important domestic advantages but also affording the country the opportunity for earning the foreign exchange with which to pay for rapidly increasing imports.
This increase in the rate of industrial growth is, of course, reflected in such important economic indicators as the consumption of steel : by 1973 [illegible]ent consumption had reached 5 400 000 m.t.

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S O U T H A F R I C A : TOTAL & URBANISED POPULATION 1924 - 1973 (X 1 000)

YEAR	TOTAL POPULATION	URBANISED POPULATION	% URBANISED TO TOTAL POPULATION
1924	7 489	2 820	37,6
1925	7 664	2 900	37,6
6	7 841	2 982	38,0
7	8 014	3 060	38,2
8	8 190	3 141	38,4
9	8 364	3 220	38,5
1930	8 540	3 301	38,7
1	8 717	3 383	38,8
2	8 898	3 468	40,4
3	9 074	3 574	39,4
4	9 254	3 659	39,5
1935	9 435	3 770	40,0
6	9 618	3 854	40,0
7	9 802	3 966	40,0
8	9 986	4 085	40,9
9	10 170	4 223	41,5
1940	10 353	4 335	41,9
1	10 536	4 397	41,7
2	10 716	4 531	42,3
3	10 899	4 693	43,1
4	11 081	4 805	43,4
1945	11 265	4 942	43,9
6	11 449	5 070	44,3
7	11 694	5 286	45,2
8	11 957	5 504	46,0
9	12 212	5 661	46,4

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1950	12 458	5 883	47,2
1	12 716	6 054	47,6
2	13 040	6 293	48,3
3	13 376	6 494	48,5
4	13 717	6 791	49,5
1955	14 067	6 940	49,3
6	14 212	7 085	49,9
7	14 786	7 333	49,6
8	15 160	7 533	49,7
9	15 546	7 735	49,8
1960	15 925	7 968	50,0
1	16 369	8 167	49,9
2	16 847	8 420	50,0
3	17 352	8 663	49,9
4	17 891	8 923	49,9
1965	18 431	9 198	49,9
6	18 998	9 481	49,9
7	19 576	9 763	49,9
8	20 161	10 039	49,8
9	20 771	10 328	49,7
1970	21 448	10 600	49,4
1	22 217	10 873	48,9
2	22 987	11 159	48,5
3	24 920	11 57[illegible]	46,4

Local production itself was in excess of this figure but 619 000 m.t. of exports as against 525 000 m.t. of imports reduced the apparent consumption to the aforementioned figure. Further, cement sold in South Africa reached the 6 362 000 m.t. level, and electricity consumption the 24,000 m. KwH level.

(iii) Between 1964 and 1967 there was, once again, a continuous influx of foreign capital, with its beneficial influence on economic development and growth.

(iv) Various large and important projects were either initiated or came into production during this period, materially contributing to the country's industrial development and infra-structure. Examples are : the expansion of the ferro-alloys industry with the result that South Africa today produces approximately 6% of world ferro-alloy output ; the Vanderbijlpark Works were also expanded during this period as also was the chemical industry. Gold production, once more with the rapid increase in the free-market price playing its ertswhile role of the power-house of the economy, reached the record figure of 31 398 million oz. in 1971.

(v) In the international sphere, the closure of the Suez Canal (during the 1967 Mid-East War), and the escalation of the war in Vietnam can be mentioned as factors which also had their influence on the South African economy.

(vi) The period is also characterised - in practically all industrialised countries - by the increasing application of new technology in production which has led to the creation or appearance of new growth sectors in the industrialised economies. In the building and construction sectors this development is reflected in the use of new building materials and methods.

In steel production these technological developments are reflected in the change from open-hearth furnaces to basic oxygen and to electric furnaces and continuous casting techniques.

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(vii) It can also be pointed out that, especially after 1967, when the devaluation of the pound Sterling led to a general loss of confidence in paper money - something which has not been recovered at the time of writing - a period of world-wide inflation was set off. This state of affairs has become progressively worse as one international monetary crisis is followed by another, as well as by "energy" and other crises. In South Africa the GDP Deflator once again began to increase from the realtively low levels experienced the period 1954 to 1962; and from 2,5% in 1963, it rose continuously to 8,5% in 1972 and to more than 10% in 1973. Since 1962/63 the Whole-sale Price Index has also been increasing at approximately the same post-war 1946 - 52 rate. These strong inflationary trends have, then, to be taken into account when considering the contributions of the various sectors to the economic life of the country.

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IV THE METAL-WORKING AND ENGINEERING INDUSTRY

The metal-working and engineering industry in South Africa owes its rapid advancement primarily to the establishment of ISCOR. The following tables, giving details about the industry, are based on the industrial censuses of 1959 - 60 and 1967 - 68, the latter being the last census for which information is available.

Table No. South Africa: Metal-Working and Engineering Industry - Industrial Census 1959 - 1960

	No. of Establishments	Employment	Salaries and Wages R 1 000	Gross Value of Output R 1 000
Basic Metal Industries:				
Iron and Steel	66	32,401	38,100	162,441
Smelting and Refining of non-ferrous metals	54	5 655	5,254	37,437
Metal Products, except machinery and transport Equipment:				
Metal pipes and fittings	18	7,123	6,372	28,343
Headed and Threaded articles	33	1 803	1,732	8,009
Sheet Metal Products	120	7 122	5,178	23,332
Tinware	24	4,516	3,493	24,272
Cables, fencing, wire, wire products	74	5,097	3,777	19,137
All other Metal Products	849	41,367	38,460	133,086
Manufacture of Machinery, except electrical Machinery:				
Agricultural machinery	110	4,672	4,722	18,600
Office Machinery	19	269	293	1,182
Industrial, mining and construction machinery	276	23,492	27,883	91,869
All other machinery	23	255	244	912
Manufacture of Electrical machinery, apparatus and supplies:				
Electrical machinery and motors	99	5,944	6,874	23,102
Insulated cables and wires	9	2,849	2,391	18,603
Electrical contracting	592	7 918	7,479	24,115
All other	140	8,961	8,479	42,830
Manufacture of Transport Equipment:				
Ship and boat building and repairs	15	1.435	1,641	3,855
Railroad equipment	13	4 260	4,102	18,360
Manufacture, assembly and repair of bicycles	16	1,274	881	4,713
Manufacture, assembly and repair of aircrafts	12	364	557	1,416
Blacksmithing	198	1.180	543	2,067

Table No. South Africa: Metal-Working and Engineering Industry: 1959-60 and 1959 - 60 and 1967 - 68 Industrial Censuses Compared.

		No. of Establishments	Employment	Salaries and Wages R 1 000	Gross Value of Output R 1 000
Basic Metal Industries	1959-60	120	38 056	43 354	199 878
	1967-68	196	63 874	103 587	498 549
Metal Products	1959-60	1 118	67 028	59 012	236 179
	1967-68	1 711	105 446	131 611	507 688
Machinery (Non-Elec.)	1959-60	428	28 688	33 142	112 563
	1967-68	963	67 013	115 189	413 772
Electrical Machinery	1959-60	840	25 672	25 223	108 650
	1967-68	498	37 332	55 643	260 306
Transport Equipment	1959-60	254	8 513	7 734	30 411
	1967-68	1 034	65 622	92 403	485 941

Table No. Employment in the Metal Manufacturing Industry - Private

	1969	1970	1971	1972
Basic Metal	69,700	72,000	74,300	77,400
Metal Products	128,400	137,600	142,000	142,700
Machinery	58,000	61,300	62,800	63,600
Electrical Machinery	31,400	43,900	46,700	46,200
Transport Equipment	71,400	81,600	84,200	83,500
Miscellaneous	43,700	45,700	46,200	47,200

IV.1 INTER-INDUSTRY ORGANISATIONS

Since the early days of its productive life ISCOR has also played a dominant and/or influential role in the various inter - industry organisations that have come into existence. The more important of these, in chronological order, are the following:

IV.1.1 THE FERROUS-SCRAP POOL AND FERROUS-SCRAP DISTRIBUTORS LTD.

The Ferrous-Scrap Pool was started in 1938 as a service department in the Steel Sales Company of Africa (Pty) Ltd., and served the steel industry by centralizing the buying of scrap in order that competition among consumers of scrap (which was then available at a relatively low level) would not cause prices to rise to uneconomic levels.

The original members of the Ferrous-Scrap Pool were ISCOR, USCO, AMCOR, Dunswart, Scaw, Stott and several foundries. The scrap acquired by the Pool was distributed to consumers on a quota basis; the consumers paid the Pool and the Pool paid the scrap dealers.

When Steel Sales Company was discontinued in 1959, the scrap service department was transferred to AMCOR. By 1961, however, the level of business transacted by the Scrap Pool had reached such a level that it was affecting AMCOR's annual accounts, and as a result the Scrap Pool was transformed into a non-profit-making private company with the previous members becoming share-holders in the new company.

By 1974, membership of the Scrap Pool had increased beyond fifty as, in the interim, Highveld, Southern Cross and various Ferro-Alloy producers, among others, had become members. With the substantially increased membership the Scrap Pool became a public company and is today known as the Ferrous-Scrap Distributors Ltd.

Scrap is at present purchased throughout the Republic and South-West Africa. Merchants dealing in scrap provide about 40 per cent or 200,000 tons per year. Some 27 per cent comes from the railways and 15 per cent from the mines, and smaller quantities directly from engineering firms and other small suppliers. Small quantities are imported from neighbouring territories.

IV.1.2 THE STEEL AND ENGINEERING INDUSTRIES FEDERATION OF SOUTH AFRICA (SEIFSA)

Established in 1943, SEIFSA operates as a central employers' organisation for the iron, steel, non-ferrous, engineering, electrical, plastics and allied industries. It co-ordinates the policies of member employer organisations and consists of 51 associates.

IV.1.3 THE CO-ORDINATING COUNCIL OF THE SOUTH AFRICAN ROLLED STEEL PRODUCERS

THE SOUTH AFRICAN ROLLED STEEL PRODUCERS' CO-ORDINATING COUNCIL

The South African Rolled Steel Producers' Co-ordinating Council (SARSPCC), founded in 1964 is recognised by the South African Government as representing the iron and steel industry in the Republic and has

as members ISCOR, USCO, Highveld, Dunswart, Scaw, Stott, McWillaw and CISCO.

The aims of the SARSPCC can be summarized as follows:

- To provide members with the opportunity, and a forum, to discuss rational plans for working in harmony with one another although in competition with one another.
- To provide a sufficient, appropriate and economic supply of iron and steel products for the requirements of the Republic and contiguous areas under competitive conditions.
- To strive for price stabilization and rationalization with respect to raw materials as well as finished products as a method of preventing un-economic price-cuttings and to achieve stable though competitive price levels in the supply of steel products to local secondary industries.
- --To consider methods whereby the products of the basic steel industry can be marketed in an orderly fashion.
- To achieve reasonable and stable levels of utilization of invested capital; and to work for the maintenance of current and future steel production facilities.
- To protect and promote interests common to members; and to encourage co-operation in planning and in practice.

In the context of South Africa's iron and steel industry ISCOR, naturally, is the national leader and the major influence with respect to considerations relevant to the industry as a whole, and although taking the initiative with respect to the rationalization of the marketing of steel products, ISCOR nevertheless acts within reasonable limits in order to protect the Corporations own interests. In order to achieve these aims, and taking ISCOR's dominant position into account, the Corporation accepted the task of administering the SARSPCC Secretariate.

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SOUTH AFRICAN PRODUCTION OF STEEL INGOTS AND CASTINGS

ISCOR AND OTHER PRODUCER'S PRODUCTION AS A PERCENTAGE OF TOTAL PRODUCTION : 1936-1973

YEAR	TOTAL PRODUCTION (x 1000 METRIC TONS)	ISCOR'S PRODUCTION (x 1000 METRIC TONS)	ISCOR'S PRODUCTION AS % OF TOTAL PRODUCTION	OTHER PRODUCERS (x 1000 METRIC TONS)	OTHER PRODUCERS' PRODUCTION AS % OF TOTAL PRODUCTION
1936	303	245	81	58	19
7	343	285	83	58	17
8	353	300	85	54	15
9	377	316	84	61	16
1940	373	302	81	71	19
1	358	286	80	72	20
2	372	298	80	74	20
3	448	378	84	71	16
4	510	435	85	75	15
1945	565	488	86	77	14
6	550	471	86	79	14
7	639	554	87	85	13
8	639	557	87	82	13
9	678	594	88	84	12
1950	802	599	75	203	25
1	995	784	79	211	21
2	1 251	1 033	83	219	17
3	1 294	1 079	83	215	17
4	1 427	1 199	84	228	16
1955	1 576	1 332	85	244	15
6	1 599	1 348	84	251	16
7	1 733	1 451	84	282	16
8	1 809	1 510	83	300	17
9	1 892	1 588	84	305	16
1960	2 112	1 731	82	382	18
1	2 484	2 099	85	385	15
2	2 635	2 214	84	421	16
3	2 830	2 332	82	498	18
4	3 095	2 569	83	526	17
1965	3 238	2 625	81	613	19
6	3 240	2 677	83	563	17
7	3 659	3 008	82	651	18
8	4 016	3 270	81	746	19
9	4 506	3 415	76	1 091	24
1970	4 596	3 392	74	1 203	26
1	4 858	3 631	75	1 227	25
2	5 280	3 953	75	1 327	25
3	5 560	4 091	74	1 470	26
4					

WB/ICL

IV.1.4 THE SOUTH AFRICAN FERRO ALLOY PRODUCERS' ASSOCIATION

SOUTH AFRICA has been called the treasure house of the World, because it is so richly endowed with minerals.

It is therefore a natural development for the country to have become one of the largest producers of ferro-alloys in the World. With its vast resouces, particularly of chrome and manganese, South Africa is now producing nearly a million metric tons of alloys a year, including the exotic alloys required in special steels.

Ferro-alloys are the salt and pepper of the steel industry, for it is in this form that certain elements - including manganese, chromium, silicon, vanadium and others - are added to molten steel to give special properties to a wide range of alloy steels

The steel industry ebbs and flows with the movement of the business cycle, and the demand for ferro-alloys is a reflection of its activity. Although perhaps small in comparison with many overseas countries, the annual steel production in South Africa will reach ten million tonnes within a few years. The ferro-alloy industry has more than sufficient capacity to meet the steel industry's requirements, and at present is exporting some 80 percent of its annual production.

THE SOUTH AFRICAN FERRO ALLOY PRODUCERS' ASSOCIATION

The Association was formed in 1964 with the object of promoting, encouraging and protecting the interests of members, and to deal with all matters that may affect the common interests of the members.

LIST OF MEMBERS

Metalloys Limited,
P.O. Box 8186,
Johannesburg, 2000.

Ferrometals Limited,
P.O. Box 8186,
Johannesburg, 2000.

Rand Carbide Limited,
P.O. Box 4380,
Johannesburg, 2000.

Transalloys (Pty) Limited,
P.O. Box 856,
Witbank, 1035.

R.M.B. Alloys (Pty) Limited,
P.O. Box 550,
Johannesburg, 200

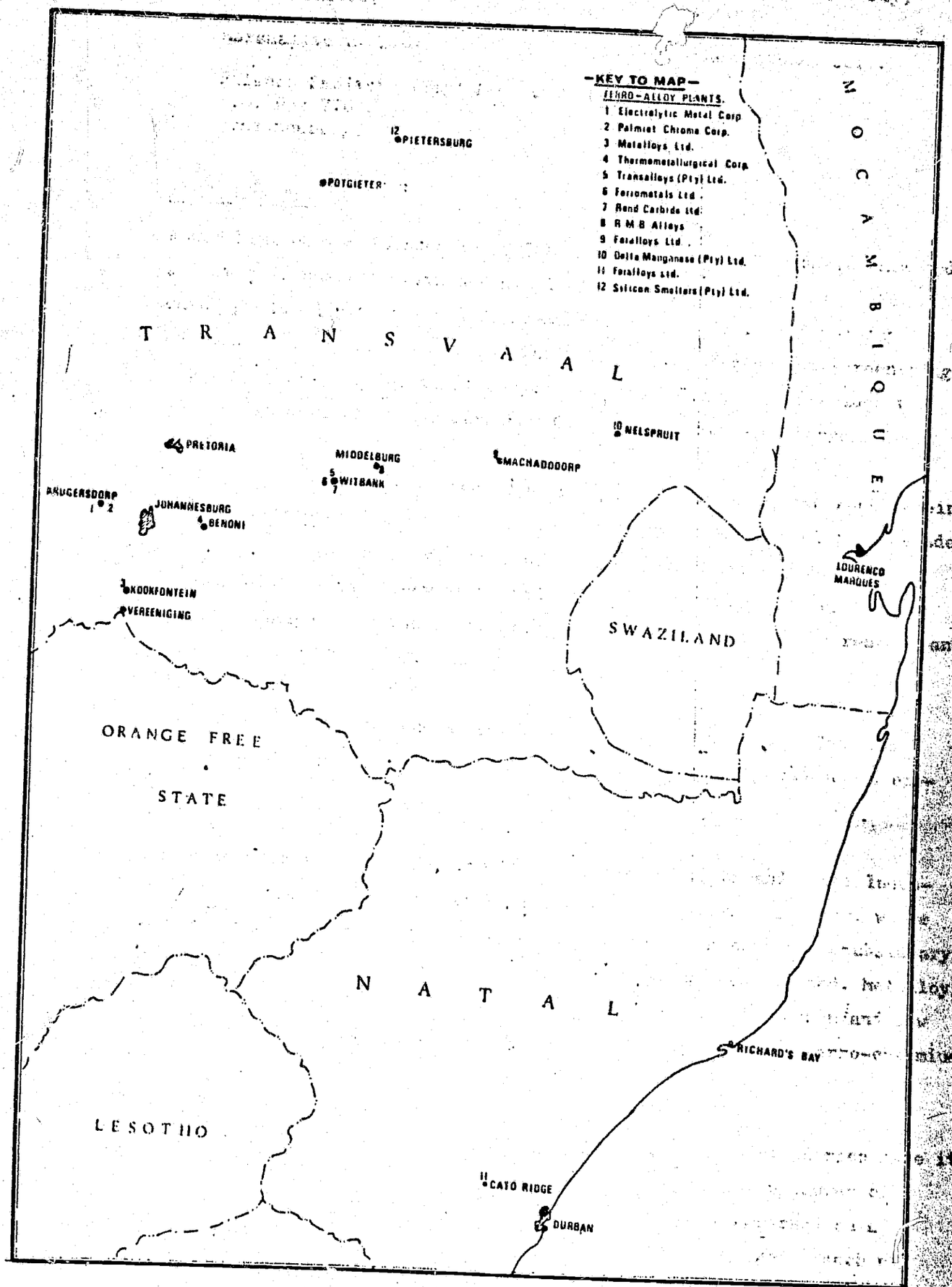
Palmiet Chrome Corporation
(Pty) Limited,
P.O. Box 658,
Krugersdorp, 1740.

Feralloys Limited,
P.O. Box 21,
Cato Ridge, 3680.

Feralloys Limited,
P.O. Box 152,
Machadodorp, 1170.

Thermometallurgical
Corporation,
(Pty) Limited,
P.O. Box 8639,
Johannesburg, 2000.

LOCATION OF FERRO - ALLOY PLANTS IN SOUTH AFRICA



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Electrolytic Metal Corporation,
(Pty) Limited,
P.O. Box 61827,
Marshalltown, 2107

Delta Manganese (Pty)
Limited,
P.O. Box 31038,
Braamfontein, 2017.

Silicon Smelters (Pty) Limited,
P.O. Box 7764,
Johannesburg, 2000.

IV.1.4.1 AMCOR LIMITED

Amcor Limited was founded in 1937 as African Metals Corporation Limited, and started business with one small blast furnace at Newcastle, Natal, which produced pig iron and ferro-manganese. In 1942, the Company commissioned the first electric furnace at a new factory at Vereeniging, Transvaal, and was the first Company in South Africa to introduce the use of electric reduction furnaces for the production of ferro-alloys.

In 1950, a new plant was erected at what is now known as the Kookfontein Works, 15 kilometres north of Vereeniging. By the middle of that decade, all the furnaces at the old Vereeniging site had been transferred to Kookfontein and three new units had been added. With the addition of two more furnaces in the early sixties, the Kookfontein Works reached an installed capacity of 60 MVA.

Amcor acquired the Witbank plant of Ferrometals Limited in 1959, and shortly afterwards added a 15 MVA furnace to the two 7,5 MVA units operating in that plant.

The company was reorganised in 1969, and the S.A. Iron and Steel Industrial Corporation (Iscor) took over the Newcastle Works of Amcor, where a further three blast furnaces were in operation. A number of subsidiary companies were formed at that time, including Metalloys Limited. Metalloys and Ferrometals supply South African consumers with high carbon and low carbon ferro-manganese, silico-manganese, ferro-silicon and ferro-chromium as well as producing vast tonnages for the export market.

The enormous reserves of manganese and chrome ores in South Africa made it obvious that this country was destined to become a major producer of ferro-alloys in the Western World and, in 1970, Amcor embarked on a major expansion programme. Four large furnaces were planned, each of 48 MVA capacity, in line with modern trends. Two have been erected at the Ferrometals Works at Witbank, one for ferro-silicon and the other for ferro-chromium, and two at the Kookfontein Works of Metalloys Limited

for the production of high carbon ferro-manganese.

Subsequently Amcor decided to erect a fifth large furnace, also for ferro-chromium production which is now nearing completion at the Witbank Works.

At Witbank, plant has been installed for the production of Söderberg electrode paste, which is used in all the new large furnaces and equipment for the production of 15 percent ferro-silicon which is widely used in heavy-media separation plants.

Amcor today has an installed capacity of 300 MVA, and is one of the larger ferro-alloy producers in the World; the total annual production is approxiamtely half a million tonnes, and some 75 percent of this tonnage is exported to various countries throughout the Free World.

Many of the raw materials required are mined by companies in the Amcor Group, which owns mineral rights for platinum, vanadium, chrome, quartz, dolomite, limestone, serpentine and phosphate ores.

IV.1.4.2 RAND CARBIDE LIMITED

In 1918, shortly after the First World War, Rand Carbide Limited was incorporated and was the first South African company to manufacture calcium carbide.

The company moved its works from Germiston to the present site in Witbank in 1926, to take advantage of lower power costs available at the coal fields, and the original furnace is still in operation, although nowadays mainly on experimental and pilot plant work. It can be mentioned that two years later, in 1928 the company obtained a quotation on the Johannesburg Stock Exchange, and since that date has had the record of having paid dividends each year to its shareholders.

Calcium carbide is still one of the company's products, together with coal char, which is a highly reactive carbonaceous reducing agent, and Söderberg electrode paste. Rand Carbide moved into the ferro-alloy field in the mid fifties with the installation of a 16 MVA furnace of the rotating type for the manufacture of ferro-silicon. This was a natural extension of the company's expertise in the operation of electric furnaces; at the same time a silica quartz quarry was opened up, some 30 kilometres from Witbank.

Expansion of ferro-silicon production was undertaken by the commissioning of a 46,5 MVA furnace in 1972, the result being that capacity has increased to 40 000 tonnes a year; about half of this is shipped to various export markets throughout the World. It is intended to develop activities in the ferro-alloy field further.

The company also participates actively in Holland Electro-Chemical Industries (Pty) Limited, which is a South African company also in the electro-thermal field, producing calcium carbide and derivatives. The plant is situated at Ballengeich in Natal. Rand Carbide has more than 1 000 employees at its Witbank Works and some 400 at Ballengeich.

IV.1.4.3 TRANSALLOYS (PTY) LIMITED

Transalloys' plant near Witbank, came into production in 1964 as a joint venture of Anglo American Corporation of South Africa Limited and Avesta Jernverks AB, of Sweden.

With two Elkem 15 MVA furnaces and two Demag 4 MVA furnaces, the plant initially produced high and low carbon ferro-chromium and ferro-chromium silicon.

In 1969 Airco Inc., of New York, one of the World's major ferro-alloy producers, acquired a 35 percent interest in Transalloys and assumed partial responsibility for marketing and technical management. At the same time it was also decided to deversify the output of the plant to include production of manganese alloys, mainly silico-manganese and medium carbon ferro-manganese.

Raw materials for the production of manganese alloys consist of manganese ore from the Mamatwan Mine of S.A. Manganese Limited, lime stone from the Lime Acres Mine of Northern Lime Company, Quartzite from Rand Carbide's deposit near Witbank, coal from the Witbank district and coke from Natal. Electrical power is a major cost constituent and the company uses about 27 million kWH monthly.

The bulk of the company's production is exported, the main markets being located in the U.S.A., Europe and Australia.

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IV.1.4.4 R.M.B. ALLOYS (PTY) LIMITED

During the late 1950's the possibility of producing ferro-chromium from Transvaal chrome ores caused Rand Mines Limited to establish an experimental pilot plant on the property of Crown Mines, Johannesburg.

Results were encouraging enough for Rand Mines to undertake further work at the old Scaw Metals plant at Driehoek, and led to the formation of an new company, R.M.B. Alloys (Pty) Limited. For the first time in South Africa, the company successfully produced low carbon ferro-chromium, which was tried and accepted overseas; the alloy had a 52/55 percent chromium and a high pure iron content.

The decision was then taken to build a full scale plant at Middelburg under the control of the then Managing Director, Mr. F.P. Bath, and the technical designer Dr. W. Bleloch. The site at Middelburg was chosen because of the availability of power and water and proximity of deposits of the main raw materials. The plant was designed originally with a capacity of 16 000 tonnes of low carbon ferro-chromium a year, and power was switched in during 1964.

With the development of new decarburising processes overseas in the production of stainless steel, the plant was converted to produce charge chromium. The concept of producing stainless steel on site from the direct reduction of chrome ore was then investigated successfully, and in 1966 the Southern Cross Steel Company (Pty) Limited began producing stainless steel on the same site. In 1969. Southern Cross took over the alloy production capacity of R.M.B., with Middelburg Steel and Alloys (Pty) Limited as the holding Company.

The future plans of the company now under the auspices of the Barlow Rand Group and the leadership of Mr. A. Grant, Managing Director, include the maintenance and improvement of its position in the field of alloy production and sales within the changing demands of the consumers and the changing technologies in the production of ferro-chromium and stainless steel.

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furnace, of 24 MVA was established during 1972. As the result of technological developments in the production of stainless steel, and of the strong demand for ferro-chromium, a fourth furnace (12 MVA) will be switched in during 1974.

There are some 1200 employees at the two plants.

IV.1.4.7 THERMOMETALLURGICAL CORPORATION (PTY) LIMITED

The Company, more commonly known as Thermcor, was founded in 1967 as a wholly owned subsidiary of Supreme Metal Works. The parent company had pioneered the production of atomised aluminium powder in South Africa, and the establishment of an aluminothermic smelter was a logical diversification. Thermcor and Supreme are both members of the Metal Sales Group.

From a pilot plant on the West Rand producing trial lots of ferro-vanadium for Iscor, the operation has grown to a potential of 100 tonnes a month at the Benoni plant of the Metal Sales Company.

Although perhaps small in comparison with production capacities of other ferro-alloy plants, product values are high and a worthwhile contribution to the national income is being made through the beneficiation of minerals.

The range of products includes the following alloys: ferro-vanadium, ferro-titanium, ferro-molybdenum, ferro-niobium (colombium) and ferro-boron.

Locally produced ferro-silicon is consumed during the silico-thermic smelting of certain of the products.

Since the process operated is an exothermic one, the company differs from other ferro-alloy producers by not using electric furnaces; batch smelts are carried out in refractory-lined steel crucibles, which give a high degree of flexibility, and this means that special alloy compositions can be tailor-made to customers' requirements. The nature of the process makes the cost of raw material the major factor, power not being significant and hence research and development are constantly directed at improvements in the recovery of the major element.

The alloys are sold in crushed form and packed in steel drums, and export marketing is undertaken by another MSG Company under the direction of Mr. R.W. Lille. High grade alloys are exported to Europe, South America, Australia and Iran, and are also supplied to South African consumers.

Future plans include a broadening of interest into the non-ferrous field and the potential products include many of the master alloys that will be required for technological growth in South Africa.

IV.1.4.8. ELECTROLYTIC METAL CORPORATION (PTY) LIMITED

The Electroytic Metal Corporation (Pty) Limited (EMCOR) was brought into existence in 1955 to produce electrolytic manganese metal of 99,9 percent purity. At that stage, the only shareholders are Anglo-Transvaal Consolidated Investment Company H.A.B. of Stockholm, Sweden.

The original pilot plant at Krugersdorp, Transvaal, produced 0,5 tonnes of manganese metal per day, but 1960, after General Mining and Finance Corporation had obtained an interest in the Company, production had increased to 8 tonnes per day. There have been several further expansion programmes, and production should reach nearly 50 tonnes a day during 1974. Some 470 employees are now engaged at the plant, under the General Manager, Mr. L. Orchard.

The main raw material, manganese ore, is railed from the Hotazel Mine of S.A. Manganese Limited in the northern Cape. The ore is then purified and processed by EMCOR into various physical specifications as flakes and powder, and is shipped in steel containers or boxes, whichever are preferred by the customer.

About 98 percent of EMCOR's production is exported to consumers throughout the Western World, and the sales are handled by A. Johnson & Company H.A.B.

Plans for further expansion are being investigated.

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IV.1.4.9 DELTA MANGANESE (PTY) LIMITED

In 1972, Delta Metal Holdings announced that it had concluded arrangements for the construction of an electrolytic manganese refinery at Nelspruit in the eastern Transvaal. The new company to be known as Delta Manganese (Pty) Limited, would beneficiate South African raw materials, using South African expertise and facilities, and should eventually be the largest of its kind in the World, producing mostly for export.

The plant, which is now nearing completion, is conveniently sited near to the export facilities of Lourenco Marques and will provide employment for nearly 200.

The essential raw materials - manganese ore, anthracite, sulphuric acid and ammonia - are all of South African origin.

Delta Manganese (Pty.)Ltd. will be producing a full range of electrolytic manganese grades including:

Low-oxygen grade - 2 mm & 1 mm thickness
Low-hydrogen grade - 2mm & 1 mm thickness
Aluminium grade - 0,6 mm thickness
Granules Powder - to customers' requirements.

Manganous oxide, which is used as a trace element in animal feedstuffs and fertilisers, will be an additional product for sale. Packing will be in 2 tonne lots either in palletised drums or in 50 lb paper pockets in pallet boxes.

Power will be supplied by Escom and water by the Nelspruit Municipality.

Of the production of manganese metal, 99 percent will be exported, and Alcan Trading Limited (the trading arm of Alcan) will be responsible for the World-wide marketing, with the exception of the U.S.A. and Mexico. Sales in these two countries will be handled by Foote Mineral Company of the U.S.A.

The production will be 14 500 tonnes a year initially, rising to 28 000 tonnes by 1976 and to suit the market's requirements thereafter. The plant has been designed for an eventual capacity of 56 000 tonnes a year.

Early diversification into the production of electrolytic manganese dioxide, manganese sulphate, manganese carbonate and other manganese chemicals is under consideration.

IV.1.4.10 SILICON SMELTERS (PTY) LIMITED

In 1971, Dowson & Dobson Limited began investigations into the possible production of silicon metal from the quartz deposits it held at the Witkop Mine, which is located about 8 kilometres east of Pietersburg in the northern Transvaal. The company had been mining the deposit on a relatively smallscale since 1951, producing silica rock, silica flour and high quality ceramic-grade and optical-grade quartz.

In 1973, as a result of successful investigations, Silicon Smelters (Pty) Limited was formed, having African Oxygen Limited (through its subsidiary Dowson & Dobson Limited), the Aluminium Company of Canada Limited and Foote Mineral Company of the U.S.A. as equal shareholders. The new company was to undertake the mining and processing of the silica deposits and the manufacture of silicon metal. The company is constructing a smelter complex at present on a site adjacent to the deposit for this purpose, at an estimated cost of R17 million.

The first furnace is expected to be in production by the end of 1974, and production is ecpected to be at least 32 000 tonnes a year, the greater part of which will be exported.

The quartz deposit consists of three parallel main bodies of one or more quartz veins. In addition, the northern and western faces of the hill consist mainly of usable quartz rubble varying in depth form 2 to 7 metres, together with massive boulders of good quality material; the estimated total tonnage available is over 2 500 000 tonnes.

The mineral, quartz, is a crystalline form of silicon dioxide (SiO_2) and the deposits at Witkop are of an exceptionally pure nature, containing 99,75 percent SiO_2).

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Table No: WORLD FERRO ALLOY PRODUCTION

COUNTRY / YEAR	1969	1970	1971	1972 (ESTIMATED)
Austria	6 100	5 700	5 300	5 400
Belgium	3 048	3 000	3 000	3 000
Canada	185 000	190 000	193 000	195 000
France	737 000	825 000	795 000	764 000
Germany	489 000	520 000	444 000	384 000
India	179 200	200 000	190 200	200 000
Japan	1 297 100	1 638 200	1 860 000	2 000 000
Norway	747 100	677 400	564 300	500 000
South Africa	425 000	430 000	445 000	490 000
Sweden	252 350	250 000	245 100	245 100
U.K.	156 000	166 000	154 000	100 000
V.S.A.	2 576 000	2 416 000	2 169 000	2 000 000
U.S.S.R.	1 081 000	1 006 000	869 000	900 000
Yugoslawia	90 000	102 000	116 000	100 000
TOTAL	8 223 898	8 429 300	8 052 900	7 886 500
S.A. AS % OF WORLD PRODUCTION	5,2	5,1	5,5	6,2

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SOUTH AFRICA: FERRO-ALLOY PRODUCERS

PRODUCTS.

PRODUCER	CURRENT CAPACITY	CURRENT PRODUCTION	FE-MN	FE-CR	FE-SI	SI-CR	FE-V	FE-MO	FE-W	FE-B	FE-COL	NI-MO	FE-TI	FE-B-SI-TI	FE-CR SI-	SI-MN
AMCOR	187 000	500 000	X (H&L. C)	X	X											
METALLOYS LTD.																
FERROMETALS LTD.	50 000															
RAND CARBIDE (AE & CI)	40 000				X											
TRANSALLOYS (PTY) LTD. (A.A.C)			X	X (H.&L.C.)											X	X
B.M.B. ALLOYS (PTY) LTD. (RAND MINES)				X												
SOUTHERN CROSS STEEL	78 000			(L.C.)												
PALMIET CHROME CORP. (GEN. MIN. & FINANCE)	25 000			X (L.C.)												
FERALLOYS LTD. (ASS. MIN. MINES OF S.A.			X	X		X										
THERMOMET. CORP. (SUPREME METAL WORKS)	12 000						X	X	X	X	X	X	X	X		
ELECTROLYTIC CORP.	18 000		MN													
MANGANESE	56 000 (EVENTUALLY)		MN													
SILICON SMELTERS	32 000				SIO_2											

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V. INDUSTRIAL SECTORS AND THE IRON AND STEEL INDUSTRY

V. 1. INTRODUCTION

The country's R 14 000 million GNP in terms of a total population of approximately 24 million generates a per capita GNP of R 550 but it is, of course, a fact that the distribution of the GNP is highly skewed since nearly three-quarters of South Africa's purchasing power is concentrated in the White population.

In general it can be said that industrially both light and heavy industries are developing rapidly with the major industries being the following: mining, textiles, iron and steel, chemicals, fertilizers, automobiles, metal working, electrical and non-electrical machinery and equipment, construction and mining machinery. This expansion is reflected in the increase in the consumption of basic iron and steel products supplied by ISCOR during the years 1966 to 1973, viz: 1 020 400 m.t. flat products in 1966 to 2 045 600 m.t. in 1973; and 884 500 m.t. profile products in 1966 to 1 125 100 m.t. in 1973.

However, in order better to understand the role that the iron & steel industry - & ISCOR in particular - fulfils in the South African economy, it is perhaps necessary to summarise the salient features of the country's economy. The following table illustrates the contributions of the various economic sectors to the Gross Domestic Product.

TABLE NO.

SOUTH AFRICA'S ECONOMY: G.D.P. BY SECTORS 1946, 1952, 1962, 1972.

Industrial Sectors	R Millions (at Factor Cost)				% Share of Total			
	1946	1952	1962	1972	1946	1952	1962	1972
Agriculture, Forestry, Fishing	212	483	682	1442	13	16	12	10
Mining, Quarrying	194	371	742	1610	12	12	13	11
Manufacturing	280	572	1119	3267	17	19	21	22
Utilities	32	51	144	400	2	2	3	3
Construction	36	116	157	688	2	4	3	5
Transport (Communications)	162	280	554	1266	10	9	10	9
Finance	165	294	591	1596	10	10	11	11
General Govt. Services	187	247	483	1502	11	8	9	10

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V. 2. AGRICULTURE, FORESTRY AND FISHING

South Africa normally produces sufficient foodstuffs to feed its population. In some crops, particularly sugar, citrus, maize and wool, the Republic produces export-earning surplusses. Agricultural output has nearly doubled during the past twenty years but the sector's contribution to the GDP has fallen from 16% in 1952 to 10% in 1972. The sector is not a direct major purchaser of either flat or profile steel products from the steel industry.

Soil fertility and rainfall limit production to 15% of the country's area. Much of the non-farmed land, however, is devoted to the grazing of livestock which generates nearly half of agriculture's total production value.

Limited rainfall also restricts the forested areas of the Republic to the Transvaal and Cape Province. Only 30% of South Africa's needs can be met from local growth of pine, eucalyptus, and wattle on 3 million acres.

Saltwater fishing makes a substantial contribution to the South African economy. The industry has also benefited from record U.K. and European prices for fishmeal which increased nearly 300% in the past year or two.

With reference to the Agricultural Sector (and in this context also the Mining Sector) it should also be emphasized that cyclical movements in the South African economy is, to a significant extent on the one hand, intensified and, on the other hand, counteracted by such exogenous factors as climate and other physical conditions. It is therefore important, when looking at the South African economy, to bear these constraining influences in mind.

Although, therefore, there have been relatively large fluctuations in the contribution of the Agricultural Sector to the G.D.P., it does seem that this section will have contributed handsomely during 1974, and present indications are that the 1975 contribution will be equally substantial.

V. 3 MINING AND QUARRYING

South Africa has extensive mineral deposits in many of which it is the world leader in either production or reserves. Oil and natural gas, however, are among the few notable exceptions. South Africa leads the world in gold mining, alone producing 75% of the free world's supply. Production for 1973 is in excess of R 1 300 million. The South African Government grants assistance to marginally profitable mines. Although these policies in the short term reduce the volume of gold mined, the policies will extend the lives of marginal mines and increase total output.

Uranium is recovered as a by-product of gold mining, and the estimated reserves of low-grade ore of 400 000 tons constitute one of the world's largest uranium reserves.

Copper output experienced a sharp increase during 1965-1966, but has shown only small but steady growth since then.

South Africa is one of the worlds largest producers of manganese - this essential mineral for the steel industry - with chief ores including braunite, bixbyite, pyrolusite, and psilomelane. The ores are unusually hard and are not subject to losses in handling in transit and do not disintegrate during prolonged storage. Various grades of ferro-manganese are produced in South Africa.

South Africa has fairly large reserves of high-grade iron ore and enormous reserves of medium-grade ore.

South Africa's chromium ore reserves are reputed to equal 75% of the world's total. Four basic grades of ferro-chrome are produced in South Africa, viz: charge chrome, ferro-chrome silicon, and high and low carbon ferrochromium. Many other types of ferro-alloys are also

currently produced in the Republic.

The reserves of platinum in the Transvaal are enormous. Figures for total production and sales, however, are not available.

South Africa is the world's second largest producer of vanadium. The vandiferous magnetite reserves, containing 1,6% vanadium pentoxide, are estimated at about 20 million tons.

South Africa is also a major asbestos producing country. Principal varieties mined include crocidolite, amosite, and chrysolite as well as a small quantity of tremolite.

South Africa ranks first as world supplier of gem-quality diamonds, although other African countries lead in output of industrial diamonds. Inland deposits occur in the form of volcanic ' kimberlite ' pipes; but recently a growing volume of diamonds have been recovered from the sea-bed off the western coast.

South African coalfields are amongst the most extensive in the Southern Hemisphere and make South Africa self-sufficient in coal. However, previous estimates of probable extractable reserves of 50 000 million tons have recently been substantially reduced.

The mining and quarrying sector is not a large direct purchaser of steel products, but it should be noted that the manufacturing sector, particularly manufacturers of industrial, mining and construction machinery are important suppliers to the mines. The mining sector is therefore an important indirect consumer of basic steel products.

The mining and quarrying sector consumes 60 000 m.t. profile products per year and only about 4 200 m.t. flat products.

V.3.1. GOLD

With continued international monetary instability connected with, among other things, the international economic and financial implications of the oil crisis, one can expect a keen interest in gold in the foreseeable future.

Moreover, since international loans will probably have to play an ever-increasing role in the financing of balance-of- payments deficits

and since there appears to be a growing demand on the part of central banks that such loans should be backed by internationally acceptable security, gold may come to play a greater part in providing collateral security for official international loans. Germany and Italy have already concluded such an agreement. If, as may be expected, their example is followed in other cases, it is reasonable to expect that gold as security for other similar loans will also be valued at market-related prices. Such a role for gold may therefore in due course ensure a strong effective floor price, fairly closely related to the free gold price.

It is remarkable that the free gold price was able to remain as high as it did during 1974 despite the fact that the international liquidity squeeze assumed such serious proportions and that interest rates reached record levels. During 1975, a measure of reflation of the main industrial economies of the world is expected, particularly by way of a more accommodating monetary policy. It is therefore expected that the ability to buy gold and the potential lower finance cost of owning gold may stimulate a greater interest in gold. Moreover, the expected later inflationary effects of a reflationary policy may in turn stimulate a demand for gold for hedging purposes.

The industrial demand for gold- particularly for use in the jewellery trade and for dental and electronic purposes - has undoubtedly declined as a result of the substantial increase in its price over the past year. Together with this, the present international economic recession, tight liquidity conditions and high rates of interest establish a presumption that industrial supplies of gold are at a low level at the moment. However, reflations of the large industrial economies of the world may restimulate this demand.

The possibility exists that particularly the smaller countries experiencing serious balance-of-payments deficits and financing problems may begin to sell gold from their reserves. It seems unlikely, however, that substantial quantities of gold will reach the market from this source. For one thing, the market is very thin at the moment and even relatively small sales of gold may cause a fairly sharp drop in the market price. For another, in view of the precedent already created by Germany and

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and Italy for gold-backed loans between central banks, it seems unlikely that any central bank will be keen to sell part of its gold reserves if financing can be obtained by merely pledging it as security.

Despite strong pressure being exerted by the IMF, particularly in 1972, in favour of the demonetization of gold and its elimination from the monetary system of the world, there are indications that for the foreseeable future gold will retain its role as an international reserve asset. In fact, as a result of its activation as security for loans between central banks at a price related to the market, it may even play a more active role in the financing system of the world than it did at the beginning of 1974.

To summarize, it is assumed that an increase in the price can be expected and that an average gold price of about $ 175 per fine ounce will obtain in 1975.

V.4. MANUFACTURING

During the past decade the physical volume of manufacturing has nearly doubled and in the 1967-1972 period industrial sales volume increased by more than 50%.

Most, if not all, manufacturing industries are plagued, however, by shortages of skilled labour which at present appears to be endemic. Recent decisions by the Government with respect to the training of Blacks should help to alleviate the position in the future. In fact, judging by the recent statements made by the Prime Minister as well as other Cabinet Ministers, South Africa can expect to see dramatic changes in the foreseeable future which could have important consequences in the industrial and labour spheres. At present, the shortage of skilled labour contributes to the high production costs.

V.4.1. THE AUTOMOTIVE INDUSTRY

The automotive industry has advanced in the last 15 years from assembling cars from imported parts and components to the production of vehicles with a South African content of about 60% by weight beginning in 1974. More than 2 million vehicles are at present registered. The role that ISCOR has played in the development of this sector is illustrated by the con-

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sumption of flat products by the automotive industry during the past eight years, viz. from 30 700 tons in 1966 to 100 700 tons in 1973. Profile products have remained at an average of 3 900 m.t. per year. It should be noted however that, as with the mining sector, considerable tonnages of steel products are acquired by the automotive industry through merchants who purchase, on average 213 000 tons profile products and 350 000 flat products per year from ISCOR. Two examples can be cited: Datsun's purchases of steel products via Wolhuter and General Motors' purchases via Baldwins. A wide range of automobile components utilising steel are also now being produced locally, these include pistons and piston rings, cables and linings, cylinder sleeves, wheel discs among many other items.

V.5. CHEMICAL INDUSTRY

South Africa's chemical industry has more than 500 establishments employing roughly 60 000 people. SASOL is, of course, the world's largest oil-from-coal operation.

An increase in production of more than 10% is expected during 1975, and since existing capacity is relatively fully utilized, an increase in the value of investment of about 16% is visualized. The greatest portion of this investment will be in machinery and equipment which could mainly be bought locally.

The industry would apparently also prefer to expand production capacity by more than is intended at present if it was not for the usual constraining influences: shortages in skilled labour and the supply of raw materials.

V.6. METAL PRODUCTS AND MACHINERY

An expansion in the physical volume of production by about 10% is expected in the metals industry. This increase is expected to be accomplished by a fuller utilization of the small degree of surplus capacity, as well as by investment, greater employment and expected increased in productivity.

The greatest part of the investment will be accomplished by direct purchases of machinery and equipment.

As far as metal products are concerned an increase of between 6% and 7% in the physical volume of production is expected and although there is a degree of surplus capacity (about 8%) available, further investment in machinery and equipment is expected of which about 62% will be imported.

With regard to machinery, although an expansion of production is expected, there is a degree of surplus capacity available which makes immediate new investment less important.

As far as electrical machinery is concerned there is much less spare capacity and a high increase in production is expected. Approximately 80% of new fixed investment will consist of purchasing machinery & equipment of which about 65% will have to be imported.

V.7 IMPORTS AND EXPORTS

The following table summarizes the Republic's imports and exports of iron and steel products for the years 1965, 1970, 1972, 1973 and 1974 (January - June)

TABLE NO. SOUTH AFICA - IMPORTS AND EXPORTS:
PRIMARY PRODUCTS (METRIC TONS)

		IMPORTS	EXPORTS
Primary profile products including ingots and blocks	1965	420 900	42 300
	1970	208 650	194 970
	1972	149 440	220 240
	1973	180 520	293 780
	1974	144 570	119 930
Primary flat products	1965	339 000	39 200
	1970	148 700	179 700
	1972	73 950	286 870
	1973	344 420	325 460
	1974	369 910	164 850
Total Profile and flat products	1965	759 900	81 500
	1970	357 350	374 670
	1972	223 390	507 110
	1973	524 940	619 240
	1974	514 480	284 780

TABLE NO. SOUTH AFRICA - IMPORTS AND EXPORTS

SECONDARY PRODUCTS (METRIC TONS)

		IMPORTS	EXPORTS
Secondary Iron and Steel Products (other than motor vehicles and parts)	1965	54 750	35 730
	1970	77 240	47 500
	1972	68 640	40 650
	1973	71 100	38 840
	1974	45 050	23 620
Miscellaneous Ferrous Products	1965	12 240	804 590
	1970	23 170	793 230
	1972	56 270	922 500
	1973	35 600	959 520
	1974	15 190	421 180

V.8. STEEL PRODUCTION, IMPORTS, EXPORTS AND CONSUMPTION IN SOUTH AFRICA; AND ROLLED STEEL PRODUCERS' SALES OF PROFILE AND FLAT PRODUCTS TO VARIOUS INDUSTRIAL GROUPS.

The above information is given in the tables that follow:

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SOUTH AFRICA : STEEL PRODUCTION, IMPORTS EXPORTS AND APPARENT CONSUMPTION

(METRIC INGOT TONS X 1000)

CALENDER YEAR	PRODUCTION	IMPORTS	EXPORTS	APPARENT CONSUMPTION	CONSUMPTION KG/CAPITA	TOTAL POPULATION X 1 000
1924	± 24			± 400	40	7489
1925		294		± 318	41	7664
6				± 409	52	7841
7				± 500	62	8014
8				512	63	8190
9		431		573	69	8364
1930				497	58	8540
1				388	45	8717
2				255	29	8898
3	± 60			393	43	9074
4	± 153	362		515	56	9254
1935	369	365		734	78	9435
6	332	504		838	87	9618
7	373	592		965	98	9802
8	389	603		992	99	9986
9	399	398		797	78	10170
1940	362	447		809	78	10353
1	381	361		743	70	10536
2	430	165		595	56	10716
3	509	202		711	65	10899
4	557	175		732	73	11081
1945	560	303		863	77	11265
6	620	315		935	82	11449
7	648	346	24	970	83	11694
8	678	422	27	1073	90	11957
9	715	486	30	1171	96	12212
1950	816	476	29	1263	101	12458
1	1143	549	32	1660	131	12716
2	1258	536	40	1754	135	13040
3	1318	465	48	1735	130	13376
4	1484	338	81	1741	127	13717

1955	1580	282	77	1785	127	14067
6	1605	327	80	1852	130	14212
7	1737	424	80	2081	141	14786
8	1832	350	79	2103	139	15160
9	1895	134	197	1832	118	15546
1960	2113	190	164	2139	134	15925
1	2475	141	204	2412	147	16369
2	2634	102	346	2390	142	16847
3	2834	162	287	2709	156	17352
4	3107	373	155	3313	185	17891
1965	3293	815	117	3991	217	18431
6	3243	194	222	3215	169	18998
7	3751	319	251	3819	195	19576
8	4061	358	467	3952	196	20161
9	4628	202	313	4395	212	20771
1970	4508	435	422	4612	215	21448
	4739	952	309	5662	255	22217
2	5380	223	507	5603	244	22987
3	5506	525	619	5412	217	24920

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ROLLED STEEL PRODUCERS' SALES OF TOTAL STEEL PRODUCTS ACCORDING TO INDUSTRIAL GROUPS
1968 = 100.

INDUSTRIAL GROUP	IND. CODE	1968 SALES X 1000 MT	WEIGHTS (1)	1973 SALES X 1000 MT	WEIGHTS (2)	1968 SALES X WEIGHT 2(1)	1973 SALES X WEIGHT 2(1)
Mining & Quarrying	000	65,8	0,0232	59,3	0,0133	1,5263	1,3758
Food, Drink, etc.	020	1,6	0,0006	10,1	0,0023	0,0009	0,0061
Chemical & Allied	040	2,7	0,0010	2,8	0,0006	0,0030	0,0030
BasicIron & Steel	060	196,0	0,0690	427,8	0,0963	13,5240	29,5182
Non - Fe Metals	080	1,4	0,0005	8,9	0,0020	0,0007	0,0045
Metal Pipes & Fittings	100	284,8	0,1003	321,7	0,0724	28,5654	32,2665
Tin cans & Tinware	120	70,6	0,0249	186,5	0,0420	1,7579	4,6439
Plate & Sheet Metal	140	127,3	0,0448	206,7	0,0465	5,7030	9,2602
Cables, Wire Products	180	45,3	0,0160	82,2	0,0185	0,7248	1,3152
Bolts, Nuts, Screws, etc.	200	58,4	0,0206	88,4	0,0199	1,2030	1,8210
Furniture & Fixtures	220	49,5	0,0174	47,1	0,0106	0,8613	0,8195
Other Metal Mnf. N.E.C.	240	55,0	0,0194	108,1	0,0243	1,0670	2,0971
Machinery : Agricultural, etc.	260	70,4	0,0248	80,8	0,0182	1,9994	2,0038
Industrial, Mining	280	34,5	0,0121	78,8	0,0177	0,4175	0,9535
Office & Household	300	18,0	0,0063	21,5	0,0048	0,1134	0,1355
Airconditioning, etc.	320	13,1	0,0046	20,4	0,0046	0,0603	0,0938
Electrical	340	21,4	0,0075	23,0	0,0052	0,1605	0,1725
Transport : Shipbuilding, etc.	380	5,7	0,0020	6,6	0,0015	0,0114	0,0132
Railroad Equipment	400	283,0	0,0997	346,5	0,0780	28,2251	34,5461
Motor Vehicles	420	49,5	0,0174	108,9	0,0245	0,7278	1,8949
Construction	480	408,1	0,1437	619,2	0,1393	58,6440	88,9790
Merchants	500	730,6	0,2573	1076,9	0,2423	185,3523	277,0864
Public Sector	540	26,2	0,0092	42,5	0,0096	0,2410	0,3910
Exports	580	217,9	0,0767	458,2	0,1030	16,7129	35,1439
Unallocated	600	2,8	0,0010	11,0	0,0025	0,0030	0,0110
		2839,6	1,0000	4443,9	1,0000	347,5962	524,5556

Index $\frac{(1973)}{(1968)} = \frac{524,5556}{347,5962} \times 100$

$= 150,9\%$

(Where 1968) = 100

i.e. On average 51% more steel products were sold in 1973 by the Rolled Steel producers than on average in 1968

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ROLLED STEEL PRODUCERS' SALES OF PROFILE PRODUCTS

ACCORDING TO INDUSTRIAL GROUPS 1968 = 100

INDUSTRIAL GROUP	IND. CODE	1968 SALES X 1 000 m.t.	WEIGHTS (1)	1973 SALES X 1 000 m.t.	WEIGHTS (2)	1968 SALES X WEIGHTS (1)	1973 SALES X (WEIGHTS (1)
Mining & Quarrying	000	60,4	0,0387	56,5	0,0236	2,3375	2,1866
Food, Drink, etc	020	0,0	0,0	0,0	0,0	0,0000	0,0000
Chemical & Allied	040	2,7	0,0017	2,5	0,0010	0,0046	0,0043
Basic Iron & Steel	060	160,3	0,1027	347,4	0,1449	16,4628	35,6780
Non-Fe Metals	080	0,2	0,0001	1,8	0,0008	0,0000	0,0002
Metal Pipes & Fittings	100	39,1	0,0251	39,8	0,0166	0,9814	0,9990
Tin cans & Tinware	120	0,0	0,0	0,0	0,0	0,0000	0,0000
Plate & Sheet Metal	140	5,4	0,0035	10,7	0,0045	0,0189	0,0375
Cables, Wire Products	130	37,9	0,0243	61,3	0,0257	0,9210	1,4896
Bolts, Nuts, Screws, etc	200	50,7	0,0325	83,7	0,0349	1,6478	2,7203
Furniture & Fixtures	220	10,2	0,0065	9,5	0,0040	0,0663	0,0618
Other Metal Mnf. N.E.C.	240	38,8	0,0249	62,1	0,0259	0,9661	1,5463
Machinery: Agricultural, etc.	260	40,7	0,0261	39,1	0,0163	1,0623	1,0205
Industrial, etc.	230	21,6	0,0138	38,7	0,0161	0,2981	0,5341
Office, Household	300	0,2	0,0001	0 0,0	0,0	0,0000	0,0000
Air conditioning, etc.	320	0,4	0,0003	1,1	0,0005	0,0001	0,0003
Electrical	340	12,8	0,0082	11,8	0,0049	0,1059	0,0968
Transport Shipbuilding, etc.	380	0,6	0,0004	1,2	0,0005	0,0002	0,0005
Railroad	400	219,9	0,1409	303,2	0,1265	30,9839	42,7209
Motor Vehicles	420	6,7	0,0043	8,2	0,0034	0,0288	0,0353
Construction	430	315,1	0,2019	470,3	0,1962	63,6187	94,9536
Merchants	500	429,6	0,2753	633,6	0,2643	118,2689	174,4301
Public Sector	540	20,5	0,0131	32,0	0,0133	0,2686	0,4192
Exports	530	84,1	0,0539	179,8	0,0750	4,5330	9,6912
Unallocated	600	2,6	0,0017	3,1	0,0013	0,0044	0,0053
		1560,5	1,0000	2 397,4	1,0000	242,3784	368,6314

$$\text{Index} \left(\frac{1973}{1968}\right) = \frac{368,6314}{242,3784} \times 100 = 151,9638\ \%$$

i.e.: On average 52% more Profile Products sold in 1973 than on average in 1968; or a growth rate of 8,75% per year.

ISCOR SALES OF FLAT PRODUCTS : INDUSTRIAL GROUPS COMPARED
JANUARY 1966 - 1973 (1966 = 100)

INDUSTRIAL GROUPS	IND. CODE	1966 SALES x 1000 M.T.	WEIGHTS (1)	1966 SALES (1) x WEIGHTS	1973 SALES x 1000 M.T.	WEIGHTS (2)	1973 SALES x WEIGHTS (I)
Mining & Quarrying	000	5,1	0,0050	0,0255	2,8	0,0014	0,0140
Food, Drink Tobacco, Textiles	020	0,4	0,0004	0,0002	10,1	0,0049	0,0040
Basic Iron & Steel	060	20,9	0,0205	0,4285	80,4	0,0393	1,6482
Non-Fe Basic	080	0,0	0,0001	0,0001	7,1	0,0035	0,0007
Metal Pipes & Fittings	100	196,7	0,1931	37,9828	282,1	0,1380	54,4735
Tin Cans & Tinware	120	37,4	0,0367	1,3726	186,5	0,0912	6,8446
Plate & Sheet Metal	140	182,5	0,1791	32,6858	196,0	0,0959	35,1036
Cables, Wire Products	180	4,8	0,0047	0,0226	20,9	0,0102	0,0982
Bolts, Nuts, Screws, Nails, etc.	200	4,8	0,0047	0,0226	4,7	0,0023	0,0221
Furniture & Fixtures	220	27,7	0,0272	0,7534	37,6	0,0184	1,0227
Other Metal Manufacturers N.E.C.	240	18,7	0,0184	0,3441	46,0	0,0225	0,8464
Agriculture, Forestry, Fishing	260	16,5	0,0162	0,2673	41,7	0,0204	0,6755
Ind., Mining, Construction Machinery	280	10,5	0,0103	0,1082	40,1	0,0196	0,4130
Office & Household Machinery	300	11,0	0,0108	0,1188	21,5	0,0105	0,2322
Airconditioning & Refrigeration	320	8,5	0,0083	0,0706	19,3	0,0094	0,1602
Electrical Machinery	340	9,1	0,0089	0,0810	11,2	0,0055	0,0997
Shipbuilding, repairing	380	4,4	0,0043	0,0189	5,4	0,0026	0,0232
Railroad equipment	400	51,9	0,0509	2,6417	43,3	0,0212	2,2040
Motor Vehicles	420	30,7	0,0301	0,9241	100,7	0,0493	3,0311
Construction	480	77,3	0,0759	5,8671	148,9	0,0728	11,3015
Merchants	500	227,8	0,2237	50,9589	443,3	0,2169	103,5992
Public Sector	540	2,3	0,0023	0,0053	10,5	0,0051	0,0242
Exports	580	69,3	0,0680	4,7124	278,4	0,1362	18,9312
Unallocated	600	0,5	0,0005	0,0003	5,9	0,0029	0,0030
		1018,9	1,0000	139,4128	2044,4	1,0000	240,7760

$$\text{INDEX } \frac{(1973)}{(1966)} = \frac{240,7760}{139,4128} \times 100 = 172,707\ \%$$

∴ On average 72,7% more flat products sold in 1973 than on average in 1966.

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ISCOR SALES OF PROFILE PRODUCTS

INDUSTRIAL GROUPS	IND. CODE	1966 SALES X 1000 M.T.	WEIGHTS (1)	1973 SALES X 1000 M.T.	WEIGHTS (2)	1966 SALES X WEIGHTS (1)	1973 SALES X WEIGHTS (1)
MINING AND QUARRYING	000	47,1	0,0533	48,0	0,0427	2,5104	2,5584
CHEMICAL & ALLIED	040	1,1	0,0012	2,0	0,0018	0,0132	0,0222
BASIC IRON AND STEEL	060	112,6	0,1274	162,1	0,1441	14,3452	20,6515
METAL PIPES AND FITTINGS	100	34,8	0,0394	34,3	0,0305	1,3711	1,3514
PLATE AND SHEET METAL	140	12,3	0,0139	7,2	0,0064	0,1710	0,1001
CABLES AND WIRE PRODUCTS	180	37,6	0,0425	46,4	0,0413	1,5980	1,9720
BOLTS, NUTS, SCREWS AND NAILS	200	22,9	0,0259	11,8	0,0105	0,5931	0,3056
FURNITURES AND FIXTURES	220	6,5	0,0074	9,4	0,0084	0,0481	0,0696
OTHER METAL MANUFACTURING	240	9,2	0,0104	17,8	0,0158	0,9568	1,8512
AGRICULTURE, FORRESTRY, FISHING	260	9,7	0,0110	19,6	0,0174	1,0670	2,1560
INDUSTRIAL, MINING & CONSTR. MACH.	280	8,2	0,0093	6,3	0,0056	0,0763	0,0586
ELECTRICAL MACHINERY	340	7,9	0,0089	11,5	0,0102	0,0774	0,1024
SHIPBUILDING, REPAIRING	380	2,0	0,0023	1,2	0,0011	0,0460	0,0276
RAILROAD EQUIPMENT	400	154,5	0,1748	252,8	0,2248	27,0066	44,1894
MOTOR VEHICLES	420	4,7	0,0053	2,9	0,0026	0,0249	0,0154
CONSTRUCTION	480	137,1	0,1551	198,0	0,1761	21,2642	30,7098
MERCHANTS	500	184,7	0,2090	199,1	0,1770	38,6023	41,6119
PUBLIC SECTOR	540	21,4	0,0242	30,5	0,0271	0,5179	0,7381
EXPORTS	580	68,5	0,0775	60,3	0,0536	5,3086	4,6733
UNALLOCATED	600	1,1	0,0012	3,4	0,0030	0,0132	0,0408
		883,9	1,0000	1124,6	1,0000	115,6113	123,2053

$$\text{INDEX} \left\{ \frac{1973}{1966} \right\} : \frac{123,2053}{115\ 6113} \times 100 = 106,6\ \%$$

Where 1966 = 100

i.e. ON AVERAGE 6,6% MORE PROFILE PRODUCTS WERE SOLD THAN ON AVERAGE IN 1966

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ANNEXURE NO. 1

THE BIRTH OF THE SOUTH AFRICAN IRON AND STEEL INDUSTRY: A BRIEF SUMMARY OF THE HISTORY OF USCO.

In 1903 an English mining engineer, Henry Horace Wright, made attempts to exploit the iron ore deposits in the Lydenburg district of the Transvaal, and although his efforts to mine ore met with failure, he was destined to succeed later in another direction which led to the founding of the Union Steel Corporation (of South Africa), or USCO Limited, in Vereeniging in 1911.

The beginnings of USCO, however, goes back to the years before the Anglo-Boer War when Samuel "Sammy" Marks and Isaac Lewis, two of the most famous of the early Witwatersrand financiers, were extending their financial empire. Both foresaw the eventual establishment of a steel industry in South Africa, but also realised that the technical problems were, for practical reasons, insurmountable at that time.

However, it wasshortly after Union in 1910, that chance rather than intention finally brought their hopes to fruition. The wave of good-will and optimism which attended the establishment of the Union of South Africa was still running high when USCO was registered on November 15, 1911. Not only did the name, the Union Steel Corporation, indicate the wider national vision created by the political events of 1910, but at long last, after much theorising and speculating, heavy industry at long last came to the Transvaal in the guise of the need to utilise rapidly growing accumulations of railway scrap.

THE SCRAP METAL SYNDICATE

Senior officials of the Central South African Railways, the Government railways of Transvaal, had been giving urgent attention to the manufacture of steel from their rapidly growing accumulations of scrap. The C.S.A.R. had, however, held its hand for a while as J.G. Anderson had formed the Transvaal Iron and Steel Co. Ltd., with a rolling mill which he had brought from New Zealand, but the attempt to roll scrap with this mill also failed.

The C.S.A.R. then continued with its own efforts and actually produced small quantities of iron from local ores in their Pretoria workshops. Their efforts, and the interest shown by several Government Departments, received great stimulus from a memorandum regarding an Iron and Steel Industry, published in 1909 by the Government Mining Engineer, R. Kotze, later Sir Robert Kotze.

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In this memorandum he recommended the manufacture of steel from scrap with the ultimate aim also to smelt local ores.

Tenders were invited for the purchase of about 15 500 tons of scrap then lying at the Pretoria railway workshops and elsewhere at £1 per ton. There would be further supplies of 500 tons a year at the same price for a period of five years; and a condition of the sale was that the successful tenderer erect a plant to convert the scrap iron into steel.

The contract was awarded to a steel syndicate headed by Horace Wright. Wright knew Sammy Marks and was aware of his long-cherished dream to establish a steel industry in South Africa, so he promptly enlisted Marks' aid and the outcome was the registration of the Union Steel Corporation (of South Africa) Limited, on November 15, 1911, with a capital of £250 000. To all intents and purposes, then, the early history of the South African Iron and Steel Industry is the history of USCO.

USCO'S STEELWORKS

The site chosen for the new steelworks was on the Transvaal bank of the Vaal River at Vereeniging, about a mile from where the Treaty of Vereeniging had been negotiated nine years earlier to end the Anglo-Boer War.

The "Vaal Works" of the Corporation was started with the most modern equipment then available: a 10/12 - ton Siemens gas-fired open-hearth melting furnace, a 600-ton press, two Siemens reheating furnaces and a 12-inch merchant bar rolling mill. Products to be made included steel castings, drill steel, small forgings, tube mill bars, rolled bars and sections, axels for carts and wagons, and tension standards and pithead rails.

THE FIRST SOUTH AFRICAN STEEL

September 1, 1913 was a festive day for both USCO and Vereeniging: The mayor and other local dignitories arriving to witness the historic teeming of the first ingot of steel scheduled for 10.00 a.m. It is recorded that excitement grew as the time approached, then subsided as the hour passed and nothing happened. The aspirant steel makers were, in fact, contending with an embarrassing problem: the tap hole had become chocked with loosened magnesite from the furnace lining. Six hours later the clogged tap hole was partly opened and the waiting throng were rewarded when a thin stream of molten steel trickled from the furnace into the ingot mold to produce the first steel ingot made in South Africa.

This first ingot was rolled into a bar of about 45 kg. in weight and 25 mm. in diameter, cut into discs the thickness of a 50 cent piece and presented

to the guests as a memento of the first steel tapped in South Africa - an occassion to which the recipients testified by signing a sertificate to commemorate the event.

USCO'S EXPANSION AND THE DEMAND FOR SCRAP

Although the inital output of about 27 m.t. was soon being sold in Johannesburg, the real value of the new steelworks was not generally appreciated until after the outbreak of the First World War in 1914, and when, by 1916, supplies of imported steel gradually diminished. Also, as supplies of scrap from the railways ran low, stockpiles of metal scrap at mines and other sites were ransacked and laboriously conveyed to railheads by ox-wagon for despatch to Vereeniging.

Despite the limitations imposed by war conditions, considerable expansion was nevertheless achieved during these early years. A new 20-ton melting furnace, capable of producing the then substantial quantity of 1 000 tons of ingots monthly, was commissioned in August 1916, and within twelve months output rose by 36%. Both the Union Government and the mines eagerly bought the Corporation's products.

USCO then embarked on two new ventures, the first involving the purchase of an electric arc furnace and the second the investment of a substantial amount in the Blast Furnace Co. Ltd., formed to exploit local ores as distinct from scrap metal.

A small blast furnace was actually erected close to the Vaal Works and operated for some years but ultimately the project had to be abandoned. Successful experiments were, however, conducted at this time in the production of ferro-manganese, ferro-chrome, ferro-silicon and other similar ferro-alloys.

By 1918, the shortage of scrap became acute but fortunately the war was now drawing to a close and the armistice was signed within three months. A £300 000 debenture loan had, in the meantime, been floated in London and the plant was extended to includea 3,5-ton Heroult electric furnace, the capacity of the 10-ton Siemens open-hearth furnace was raised to 20 tons and an annealing furnace was erected. On December 12, 1919, Sammy Marks attended a board meeting to report a successful interview he had had with General Smuts, but his colleagues did not see him again because he died on February 18, 1920.

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THE KLIP WORKS AND SUNDRY CRISES

The post-First World War depression had an almost cripling effect on the Corporation and by September, 1921, the orders on hand had shrunk to such an extent that they could be met by rolling no more than two days a week. However, thanks to the construction of a chain of grain elevators needing reinforcing steel rod and the electrification of the first section of the main line between the Transvaal and Natal, new markets for steel products were developing in South Africa.

In 1925 a major development occurred when the Corporation began the construction of the Wire Works on a new site in Peacehaven, near the Klip River; and on April 24, 1927, the new works went into production. To finance this development, USCO's share capital was increased from £750 000 tp £2 000 000, and with the subsequent increase in the number and types of operations carried out at this plant, the Wire Works was more appropriately named the Klip Works.

In the year the Wire Works was completed, the Corporation was confronted with a crisis that appeared to threaten USCO's very existence. In 1927 the Government announced its intention to establish ISCOR in Pretoria and the fear was that the Government-sponsored steelworks could damage USCO in competion for the steel market in South Africa. Alarmed at this threat to Vereeniging's major industry, the Town Council sent a deputation to Cape Town to urge the Government to save USCO from ruin.

With the deputation went Colonel Karl Rood in his capacity as president of the local Chamber of Commerce. This was then also the start of Col. Rood's long association with USCO, first as director and subsequently as chairman, which continued for 32 years. Col. Rood approached the Hon. F.E. Beyers, then Minister of Mines and Industries, with a proposal which, if adopted, would enable ISCOR to be USCO's saviour and not its destroyer. The two companies were to work side by side and not in competion.

Accompanied by Col. Rood, Mr. Beyers interviewed the Prime Minister, General J.B.M. Hertzog, who gave the project his blessing and had it referred to Dr. H.J. van der Bujl, first chairman of ISCOR, for favourable consideration. The result was an agreement between ISCOR and the African and European Investment Co. whereby ISCOR obtained 125 000 preferent "A" shares, and the opportunity to appoint four of the eight directors, one of whom was to be the chairman with a casting vote. USCO agreed not to compete with ISCOR and therefore concentrated on the production of rails (up to 20 kg.) and allied products, nuts and bolts, steel castings, special

steels, forgings, wheels, axels and copper conductor.

USCO thus emerged from one crisis only to be faced with another - a world depression, known as the "Great Depression" which also affected South Africa profoundly. For a period of nine weeks USCO's plant had to be shut down while the Wire Works, on which great hopes had been placed, sustained a substantial loss.

DIVERSIFICATION AND PROSPERITY

In order to combat the effects of the depression the Corporation began to manufacture new products. An important new development was the manufacture of hollow-drill steel at the Klip Works. The high quality of this product soon gained a ready market in the mining industry and today USCO is the world's largest single manufacturer of drill steel, and enjoys a flourishing trade with many overseas countries. It was also decided to manufacture copper and aluminium conductor and the success which has attended the manufacture of non-ferous products since then has contributed substanially to USCO's overall turnover.

Demands for extra plant led to an increase in capital which was once again raised to £850 000, and in 1937 the shares of USCO were quoted for the first time on the Johannesburg Stock Exchange.

By now, however, war clouds were gathering in Europe and the Union Defence authorities began to consider plans for the conversion of South Africa's heavy industries into munition-making plants. Also, many products hitherto regarded as uneconomic for local manufacture were no longer available from overseas sources and, among others, USCO was urged to step into the breach. To this end large extensions to the factory building were promptly approved and the Corporation began to manufacture alloy steel, tool and die steel, spring steel and other special grades needed for both military and commercial purposes. An important addition to the plant was another electric arc furnace, raising the number to five, and increasing despatches for 1944 to above £2 000 000 for the first time.

The corporation further undertook to produce three types of aircraft bombs. Within 18 months the output reached 1 000 per week, and by the time Japan was defeated in August 1945, the grand total of "500 -pounders" came to 21 850.

USCO's EXPANSION SINCE 1945

Since the end of the Second World War, the Corporation's further development has been marked by a number of agreements, involving either or both financial and technical assistance with several overseas manufacturers of long standing in their particular fields and which have been of inestimable benefit to USCO.

In 1954 USCO acquired Veldmaster (Pty) Ltd., manufacturers of agricultural discs and component parts. Under the trade name of "Veldmaster", this company has gained the major share in this particular market in South Africa, and has a flourishing trade in the overseas replacement and original equipment market. Veldmaster/Rhodesia (Pty) Ltd. followed in 1967.

During the years which have followed the Corporations golden jubilee (1961) massive capitalisation in plant and expansion have taken place. In August, 1962, the installation of a R2,75 million rolling mill broadened the range of the Corporation's light steel sections at the Vaal Works. In May 1966, a continuous casting plant and a 40,8 m.t. electric arc furnace followed, also at the Vaal Works. At the Klip Works a new cogging mill was commissioned in March 1965, and early in 1968 the first steel degassing plant on the African continent was brought into operation at the same works.

In December, 1969, the Corporation announced a production facilities development plan with an estimated cost of between R12 million and R15 million. This plan provides for new electric arc furnaces at both the Vaal and the Klip Works, the elimination of the Vaal open-hearth complex, the expansion of continuous casting facilities at the Vaal Works and an additional rolling mill to cope with future growth.

USCO's FURTHER DIVERSIFICATION

The concept of diversification in USCO's case was, of course, not new, and possibly had its origin in the early thirties when S.A. Bolts and Nuts was established to combat the series effects of the Great Depression. This was followed by the non-ferrous plant, which today contributes a very substantial proportion of USCO's turnover and the wholly-owned subsidiary, Veldmaster (Pty) Ltd. The latter company now contributes practically all the agricultural discs needed in South Africa and Rhodesia and also enjoys a flourishing export trade in these products.

The price on the Corporation's main products which remain fixed for relatively long periods also compelled USCO to turn its attention to the possibilities of further diversification into enterprises in fields where price controls do not place ceilings on selling prices. To this end the African Aluminium Co. (Pty) Ltd. for the production of aluminium rod was established in Port Elizabeth

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in association with Aberdare Cables (Africa) Ltd. In partnership with the Palabora Mining Co., the Transvaal Copper Rod Co. was launched to convert molten copper supplied by the mining company into rod by means of the continuous casting technique.

The National Materials Service Corporation (Pty) Ltd. (NAMASCOR) started its operations at the end of 1969 as a partnership between USCO and the West German steel producer and merchandiser, Klökner and Co. Until then "materials service" was somewhat of a foreign concept in the engineering world of South Africa, and today NAMASCOR operates from Roodekop in one of the most modern warehouses in the world, covering an area of 10 800 sq. meters and erected at a total cost of R550 000 of which R118 000 was initially spent on modern equipment for preprocessing materials.

At the beginging of 1970, USCO announced that it would be taking part in an aluminium and alloy factory in partnership with ALUSAF. The company operates under the name ALUSTANG (Pty) Ltd., and at the same time USCO Aluminium Corporation was formed to diversify into aluminium extrusions, castings, forgings and other products.

From this brief review of the history of USCO it can be seen that the Corporation has at all times endeavoured to employ advanced technology in steel making and has also diversified into the metals and materials industries. Since July, 1973, ISCOR has been actively involved in the marketing of USCO's rolled steel products and forgings.

ANNEXURE II

DUNSWART IRON AND STEEL WORKS LIMITED

One of the early pioneers of the steel industry in South Africa, J.K. Eaton, founded the firm Cartwright and Eaton, Ltd. at Benoni in 1911. This enterprise was, in fact, the forerunner of the present Dunswart Iron and Steel Works, Ltd. Long experience in steelmaking has given this company some advantage, as Dunswart today is one of the more profitable steel producers in the Republic. The company's basic philosophy is one of the "utmost flexibility" and the mills are laid out in such a way that quick roll changes can be achieved, thus allowing Dunswart to cater for comparatively small lots. Dunswart Iron & Steel Works Ltd. was granted a listing on the Stock Exchange during 1962, and the largest shareholders are Alpha Free State Holdings Ltd. and International Combustion (Africa) Ltd., which together hold about two-thirds of the issued ordinary capital.

RANGE OF PRODUCTS

Dunswart manufactures rolled sections and castings in mild, carbon and alloy steel. The production of rolled sections in mild steel forms the most important part of the steelworks and a wide range of rounds, squares, flats, angles and channels in the light and medium categories are produced. As a result of an agreement which had been reached with the Standard Brass, Iron & Steel Foundries Limited on the 1st July, 1968, the latter company acquired the foundry interests of Dunswart. By March, 1970, the bulk of the foundry production had been shifted to the new heavy moulding shop at the Standard Brass works.

RAW MATERIALS

Steel scrap forms the basic raw material although it is mixed with small portions of pig iron before it is smelted by the use of electric arc furnaces. During periods when scrap is in short supply the company is forced to use substantial quantities of pig iron, which is not only considerably more expensive but also increases the wear and tear on the electric furnaces and shortens the life of the furnace linings. To overcome these adverse factors in the supply of raw materials, tests have been carried out to ascertain the suitability of the production of sponge iron which can be used as a substitute for scrap steel. The feasibility of this project was been proved by industrial tests carried out in Germany, but during 1967 the board decided to follow the Government's recommendations to defer further

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expansion schemes and therefore postponed the erection of the sponge iron plant. Generally speaking, Dunswart has been able to obtain a sufficient supply of steel scrap over the years particularly at the relatively low price which remained fixed at about R13 a ton for several years. Apart from the generally expected increase in the prices of primary steel products, scrap metal merchants also feel that current price for scrap metal are unrealistic and it is therefore only logical to expect increases in the prices of steel scrap.

PLANT, CAPACITY AND EXPANSION PROGRAMME

Since the early sixties Dunswart has launched several expansion programmes in order to increase capacity in different sections of the plant or to cut costs and improve efficiency. Among other things, a new 30-inch cogging mill, as 45 metric ton electric arc furnace, new soaking pits and a 70-ton hot-metal crane were installed with the result that fixed assets, after adding back depreciation, rose from R1.1 million in 1955 to R11.7 million on 30th June, 1967. Capital expenditure during the past ten years amounted to about and was distributed as follows:

1964 : R1,600,000
1965 : R1,600,000
1966 : R1,500,000
1967 : R 700,000
1968 : R 352,000
1969 : R 270,000
1970 :
1971 :
1972 :
1973 :

The present layout of the steelworks, with an installed melting-shop capacity of 350,000 tons, matching cogging mill and diversified finishing mill capacity (i.e. about 260,000 ton finished sections), is well geared to the requirements of the South African market. The special layout of the mills ensures a flexibility that is most suitable for the relatively small home market which calls for a vast range of specialised engineering requirements.
A comprehensive expansion programme for the erection of a continuous-casting

plant on the old steel foundry site at the Benoni works was announced during February, 1970. The main contract, which was estimated at R1.5 million, was awarded to an Italian firm, Danieli, which had also been responsible for the erection of a similar plant in the Cape Province. The structural steelwork was done by Dorman Long while a R140,000 ladle crane was supplied by Krupp South Africa.

DEMAND

According to Dunswarts' sales manager, the company experiences a strong demand for all its products. As a result of the tight position prevailing during 1969, however, Dunswart was forced to introduce an allocation system in order not to accumulate a backlog in the order books. By allocating a quantity of steel to each customer on a basis of previous sales, Dunswart succeed in meeting its delivery dates while the mills are worked at maximum capacity. Product lines where demand is extremely strong are reinforcing steel and light structural steel. Dunswart supplies about 20% of the reinforcing steel used in South Africa, while it is the only supplier of light structural steel to Powerlines (Pty) Ltd. which is the major erector of high-tension overhead transmission lines for Escom.

PRODUCTIVITY AND PROFITABILITY

The relatively high profit yields attained by Dunswart can be ascribed to the company's productivity drive. Notwithstanding the increase in labour costs, total wages per ton of molten steel produced by this company fell from R15,05 in 1960 to R12,13 in the 1968/69 financial year. During 1969, a record of 259,759 tons of molten steel were produced against a production of 102,543 tons in 1960, whilst the staff and labour complement throughout the works which stood at 1,870 in 1960 dropped to 1,789 in 1969. The chairman of the company is confident that the molten steel production will be increased by a further 20 per cent during the 1970s with the same labour complement.

ANNEXURE III

HIGHVELD STEEL AND VANADIUM CORPORATION LIMITED

The economic importance of the vanadium-bearing titaniferous magnetites of the Transvaal Bushveld complex was emphasized in 1949 by Dr. William Bleloch when he demonstrated the possibility of co-producing steel and vanadium from the same ore by an electric smelting process. In September, 1959, the Anglo American Corporation decided to investigate further the Bleloch method and R1 million was allocated for capital costs and operations of the pilot plant for one year. Over the whole period of investigation some R3.4 million was eventually spent. Following extensive geological exploration in the Lydenburg, Pietersburg, Pretoria and Rustenburg districts, at least 200-million tons of ore to opencast limits were proved, with very consistent values averaging 56% iron, 13% titanium dioxide, and 1.4 to 1.9% vanadium pentoxide. Highveld and its wholly-owned subsidiary, Ironstone Minerals (Pty) Ltd., which was acquired in May, 1962, now hold mineral rights over reserves of more than 120-million tons.

A metallurgical pilot plant started operating in April, 1961, and by May, 1963, it had produced about 5,000 tons of vanadium pig iron of which 1,500 tons were blown to steel. Confirmatory test work was also carried out in Norway, Germany and Austria. In a series of tests in Austria a range of vanadium-bearing low alloy steels was produced in the form of flat products and their physical characteristics showed excellent high yield properties.

The intensive study of the world vanadium market was continued. In 1963, vanadium prices fell and sales of vanadium pentoxide by Transvaal Vanadium Company (Proprietary) Limited, a company in which Anglo American Corporation had a substantial interest, were less than 40 per cent of its sales in 1962. In 1964, however, a major change in supply and demand took place and for the first time it appeared that consumption of vanadium would exceed production, owing mainly to a growing demand for vanadium structural steel in the United States of America. In April, 1964, the Vanadium Corporation of America indicated its willingness to enter into a long-term contract with Highveld for the supply of vanadium-bearing slag.

In November, 1964, it was decided to go ahead with the construction of an integrated iron, steel and vanadium plant, at a cost originally

estimated at R117 -million (later upgraded to R127-million). A study of sites revealed that the Witbank area was the most suitable. It forms part of a rapidly developing industrial region with adequate supplies of electricity, water and coal. The site chosen for the steelworks allows for future plant extensions to a capacity of some 2 million tons of finished products a year. The plant is linked by rail with the major South African ports of Durban, East London, Port Elizabeth and Cape Town.

In January, 1965, Davy and United was commissioned to design the plant and in September, 1965, engineers, agents and supervisors were appointed on site. Levelling of the site started in June, 1965, and was completed in February, 1966. The civil engineering contract for plant foundations was placed in November, 1965, and erection of the steel-framed buildings began in August, 1966. The first smelting furnace of the iron plant was commissioned in February, 1968; vanadium slag production started in April, 1968; steelmaking and continuous-casting in July, 1968; the first stage of the rolling mill was commissioned in August, 1968; and the entire complex was in operation by the end of December, 1968.

RANGE OF PRODUCTS

Highveld's Steelworks consists of facilities for the storage and preparation of iron ore and other raw materials, pre-reduction and electric smelting of ore, recovery of vanadium slag, oxygen steelmaking, continuous-casting and a medium to heavy section rolling mill with provision for the production of universal sections and rails.

VANADIUM

Vanadium slag is produced exclusively for the export market, where it is converted into ferro-vanadium by different processes. Vanadium is used to give hardness and toughness to high-speed cutting steels and to die steels. It is also used extensively in high-strength steel for such components as seam pipes and rotors in steam power stations, high-pressure gas and oil pipe lines, building and bridge construction and frames for heavy transport vehicles. More recently vanadium has found an additional market as an alloy with titanium for aircraft frames

and for casings and other parts of gas turbines for aircraft.

STEEL PRODUCTS

The use of a universal mill gives Highveld the advantage of producing a very wide range of steel products. The following is an example of the range of sections produced by the Corporation:

Rails	over 22 kg/m
Billets, Blooms	44 mm - 114 m, and over 114 mm on any side
Equal angles	over 203 mm united
Channels	over 229 mm united
Flats	over 150 mm wide
Rounds	100 mm and over
Universal beams	over 229 mm united
Universal columns	over 229 mm united
Joists	over 229 mm united

PLANT OUTPUT AND LAYOUT

The rated capacity of the plant is 23,000,000 lb. of vanadium pentoxide contained in slag and 480,000 tons of pig iron annually. Most of the pig iron is converted to steel and rolled in a combination section and universal beam mill to produce about 300,000 tons of medium-heavy structural sections and rails each year. In addition, some 150,000 tons of semi-finished steel and blown metal are produced for direct sale. However, ample provision has been made in the layout and design of equipment to allow for increases in plant output.

There are significant differences between the Highveld process and that of the more conventional modern steelworks, especially in the iron making and vanadium extraction process. As the conventional blast furnace process is not suitable for the smelting of magnetite ore the electric smelting process was therefore selected. The hot metal from the smelter contains 4 per cent carbon and 1.35 to 1.40 per cent vanadium and is delivered to two 800-ton gas-fired hot metal mixers, which charge the 50/60-ton shaking ladles lined with alumina fire bricks. After scrap has been added, the ladle is placed in one of two shaking emplacements and shaken while oxygen is blown onto the hot metal through a water-

cooled lance. The vanadium combines with the oxygen and is recovered in the form of slag with a high vanadium pentoxide content.

After the extraction of vanadium the metal is blown into steel by oxygen furnaces. The steel is transferred by car and crane to the continuous-casting plant where there are three continuous-casting machines, one casting billets and two larger machines casting blocks and blooms. The rolling mill is a semi-automated combination mill for rolling universal columns, parallel flanged beams, standard joists, channels, angles and flats. In addition the mill is equipped to produce rails up to a weight of 52 kg/m in lengths of up to about 40 m. This is the only universal mill in the Republic and it gives a great advantage to Highveld as a more comprehensive range of beams can be offered.

RAW MATERIALS

ORE

The ore is railed from Highveld's Mapochs mine at Roossenekal, about 90 miles north-east of Witbank. The ore is mined by strip mining methods and is transported by conveyor to the railway station. Ore for the Vantra division of Highveld is at present obtained from the Transvaal Vanadium Company's mine at Kennedy's Vale near Steelpoort in the Eastern Transvaal. The company pays a royalty to East Rand Consolidated Limited, which granted the mineral lease.

OTHER RAW MATERIALS

COAL

Highveld has a long-term contract with Apex Mines Limited for the supply of washed and screened No. 5 seam coal from its Greenside colliery. Highveld has the right to the entire ore reserve of the mine which, it is estimated, will ultimately yield at least 18,000,000 tons of coal.

DOLOMITE AND SILICA

Short-term contracts for dolomite and silica have been negotiated with African Metals Corporation Limited and Rand Carbide Limited, respectively. The quarries have extensive ore reserves.

ELECTRODE PASTE

Rand Carbide Limited has contracted to supply electrode paste from its Witbank works, and has installed production capacity to meet Highveld's requirements.

OXYGEN

African Oxygen Limited ("Afrox") has a 20 year contract to supply Highveld with high purity oxygen. To meet Highveld's specific requirements Afrox has built a 150 ton a day oxygen plant adjacent to the steelworks.

POWER AND WATER

Electric power is being supplied from a sub-station of the Electricity Supply Commission adjacent to the works at Witbank. The Witbank Municipality supplies Highveld's water requirements, which is about 2,700,000 gallons a day.

PRODUCTION

By June, 1969, iron output had risen to 74% of rated capacity while production in the steel plant reached 58% of rated capacity. Rolling of finished steel sections started in October, 1968, and by the year-end a large proportion of the product range had been proved. Particular emphasis has been placed on the production of universal beams and columns as these sections are in greater demand and attract higher selling prices than conventional sections. During July, 1969, the production of finished sections reached 46% of rated capacity and output is expected to increase at a satisfactory rate.

During the financial year ended 30th June, 1969, 15,000 tons of vanadium slag were produced for shipment to overseas customers, who convert this slag into ferro-vandadium by different processes. Because each customer required slag of a particular specification, operations have been modified in an effort to manufacture slag to customer requirements.

Sales of vanadium pentoxide (from the Vantra division) increased by almost 40% during the financial year and production was expanded in April, 1969, by re-starting the two kilns which had been shut down during the extremely weak market conditions of the previous year.

DEMAND

STEEL PRODUCTS

The high level of demand for all steel products throughout the world

has facilitated the successful marketing of Highveld products and statisfactory prices have been obtained both for semi-finished steel products and for universal sections. Whilst sales in the domestic market should show a steady increase, it will be necessary for the Corporation to sell in the export markets for some time ahead. It is reported that Highveld products have been well received by overseas customers and that the encouraging support from local customers has justified the introduction of universal sections into the domestic market. The high level of demand experienced in the past has continued and Highveld's sales manager predicts a growth rate of 6 - 7% over the full range of steel products in the near future. It can be expected that Highveld will benefit considerably by a general increase in the steel price as all its steel products are subject to a fixed price.

VANADIUM

From 1964 to mid 1967 a worldwide shortage of vanadium was experienced and despite very large releases of vanadium pentoxide from American stockpiles, the price rose rapidly. These developments had an unsettling effect on the vanadium market, high-cost producers were able to continue operations while some new high-cost producers were encouraged to enter the market. A more serious aspect was that steel producers, faced with a shortage of supply and with high prices, began to use substitute materials to develop alternative methods of obtaining high-strength properties. During 1968, the price of vanadium pentoxide dropped to around 90 U.S. cents a pound which was the approximate price used as the basis for calculation when it was decided to proceed with the Highveld project. Highveld is hoping that the guaranteed availability of these products at stable prices from itself will discourage substitution and encourage a wider use of vanadium. To this end Highveld has established a market development division which is promoting interest on a worldwide basis in the increased use of vanadium products, particularly by steel producers. During 1970, it was reported that the U.S. domestic demand for vanadium ore, pentoxide and alloys looked quite encouraging despite some probable decline in total steel production to which the use of vanadium is highly related. It is understood that demand in Europe and Japan should also increase in future. Buyers have hopes for reasonable price stability in future but vanadium is at present the most lively of the ferro-alloying markets.

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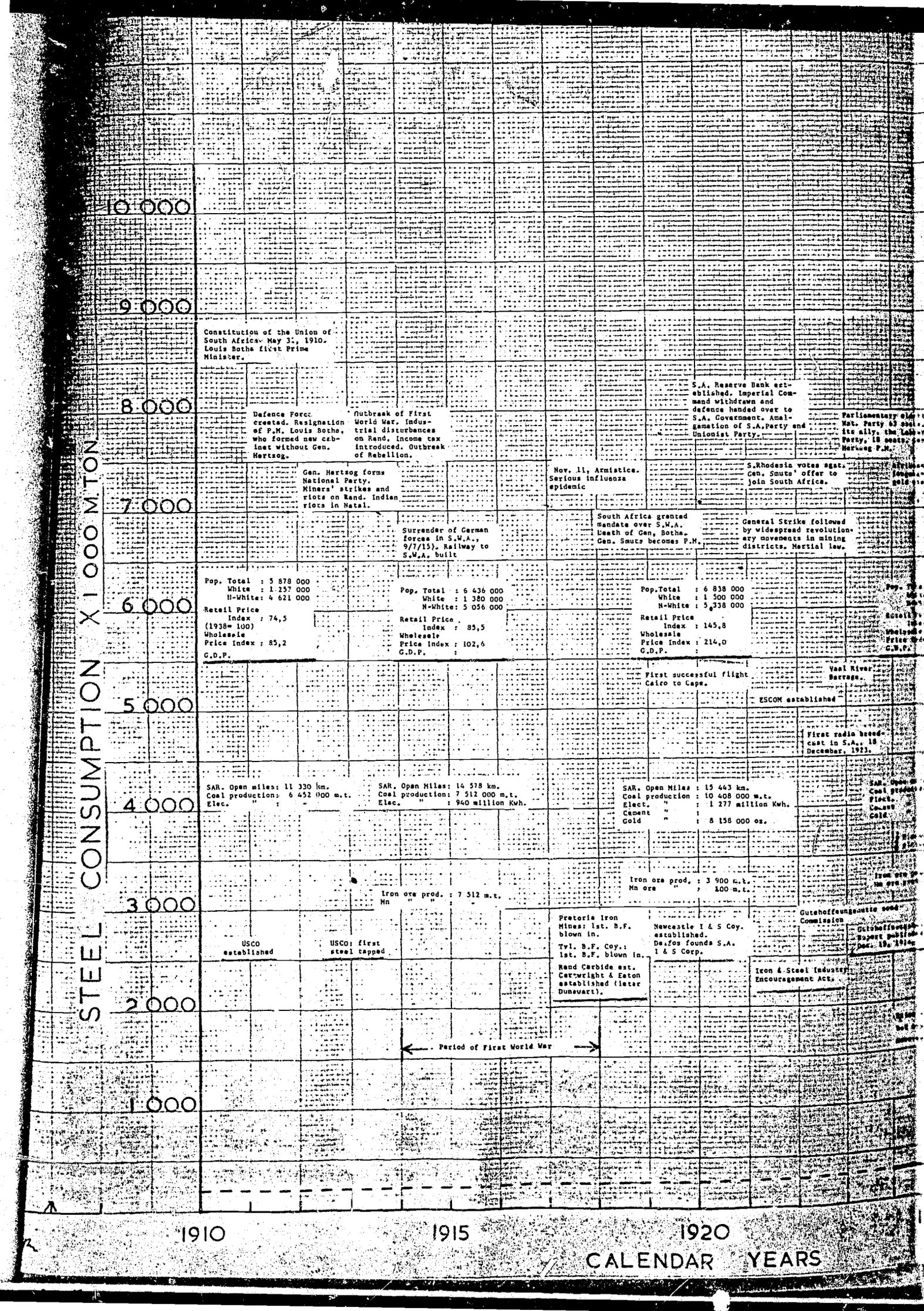
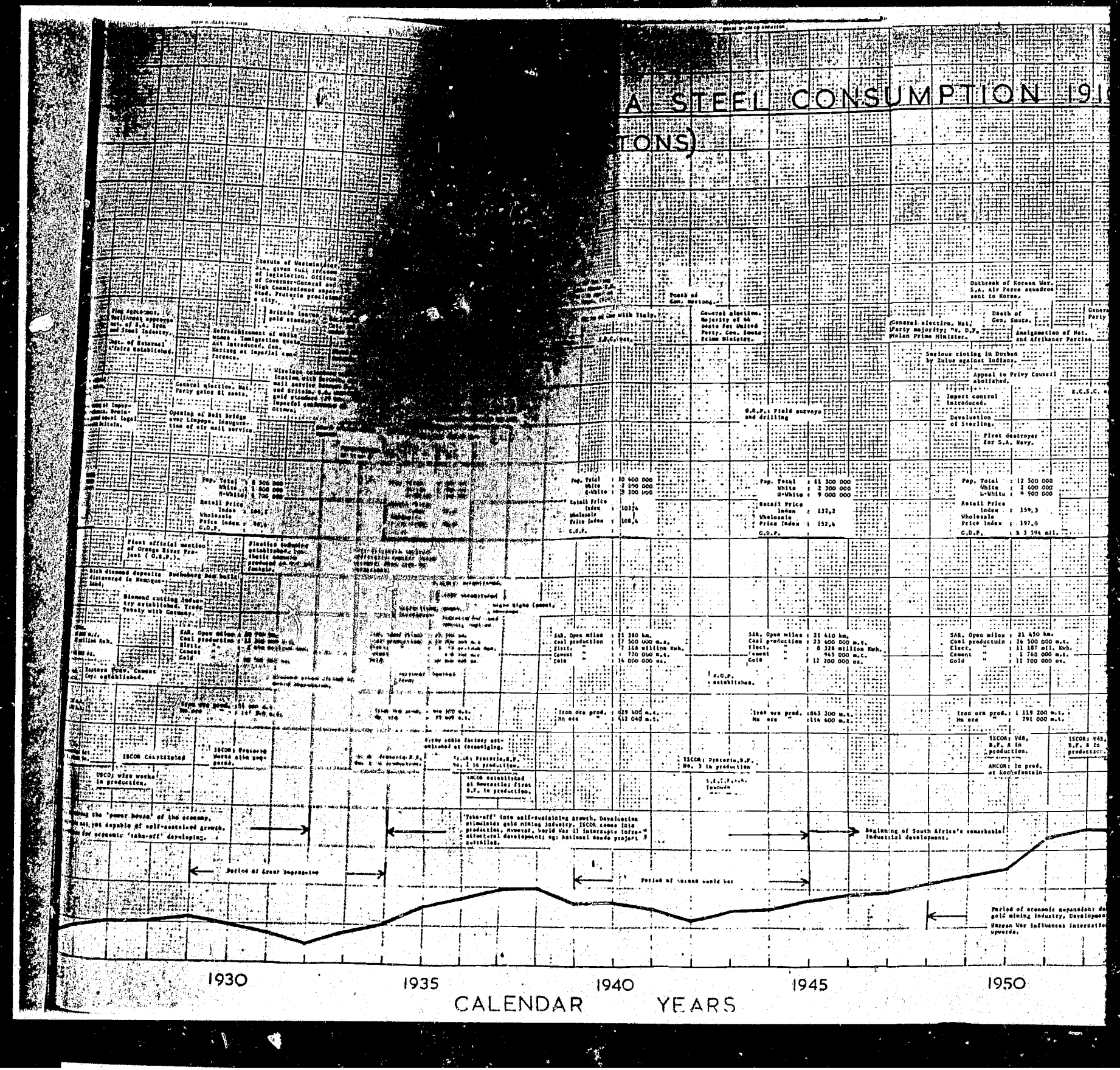
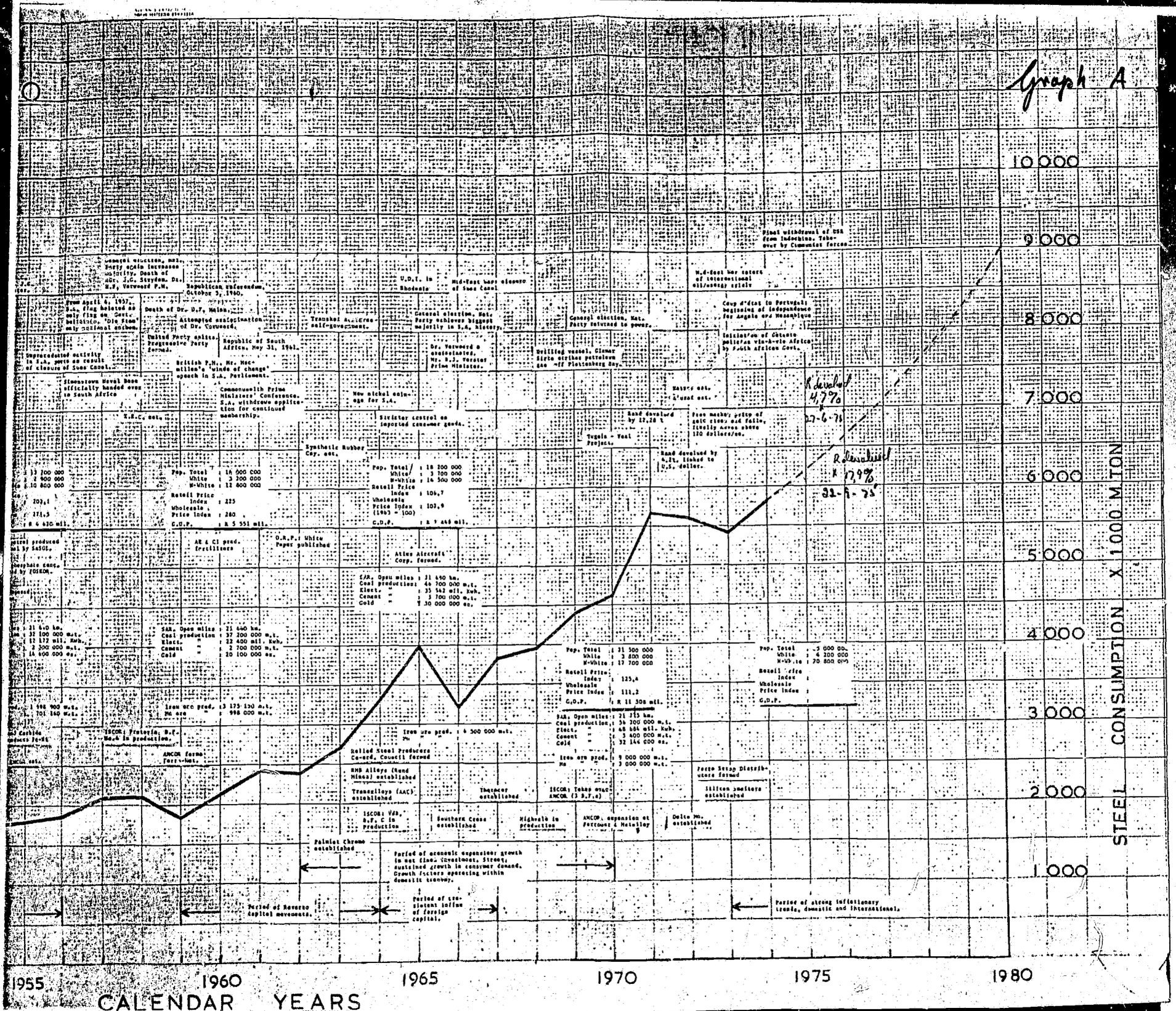
There is a shortage of vanadium metallics and quite a few producers, including Highveld, are increasing production. Free world output of vanadium totalled an estimated 15,700 short tons in 1969 compared with 12,500 short tons in the previous year - an increase of 25.6%.

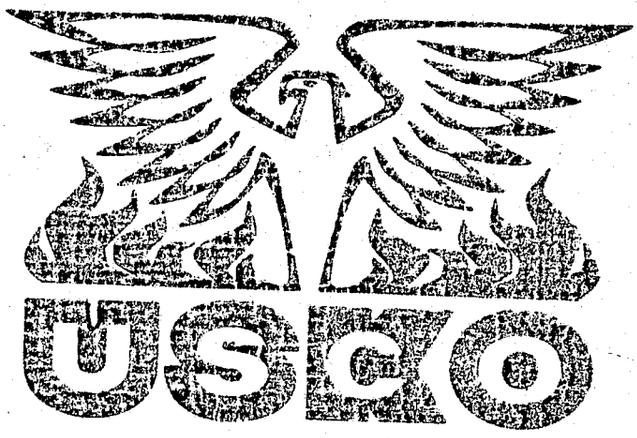
FUTURE PROSPECTS

Although Highveld's loss for the year ended June, 1969, was a colossal R9,799-million, operations started being profitable towards the end of 1970, and the loss was therefore substantially reduced. Of this loss, interest on the Corporation's loans accounted for R3,444 million while depreciation charges came to R2,411 million. According to the chairman, encouraging progress with all sections of the complicated plant achieving higher output has been reported. The marketing of all the Corporation's products has been highly successful and the exceptional high level of demand in export markets is expected to continue into the 1970's.


STEEL CONSUMPTION X 1 000 M TON
10 000
9 000
8 000
7 000
6 000
5 000
4 000
3 000
2 000
1 000
1910
1915
1920
CALENDAR YEARS
Constitution of the Union of South Africa. May 31, 1910. Louis Botha first Prime Minister.
Defence Force created. Resignation of P.M. Louis Botha, who formed new cabinet without Gen. Hertzog.
Outbreak of First World War. Industrial disturbances on Rand. Income tax introduced. Outbreak of Rebellion.
S.A. Reserve Bank established. Imperial Command withdrawn and defence handed over to S.A. Government. Amalgamation of S.A.Party and Unionist Party.
Parliamentary elections. Nat. Party 63 seats, its ally, the Labour Party, 18 seats. Gen. Hertzog P.M.
Gen. Hertzog forms National Party. Miners' strikes and riots on Rand. Indian riots in Natal.
Nov. 11, Armistice. Serious influenza epidemic
S.Rhodesia votes agst. Gen. Smuts' offer to join South Africa.
Surrender of German forces in S.W.A., 9/7/15). Railway to S.W.A. built
South Africa granted mandate over S.W.A. Death of Gen. Botha. Gen. Smuts becomes P.M.
General Strike followed by widespread revolutionary movements in mining districts. Martial law.
Pop. Total : 5 878 000
White : 1 257 000
N-White: 4 621 000
Retail Price Index : 74,5 (1938= 100)
Wholesale Price Index : 85,2
G.D.P.
Pop. Total : 6 436 000
White : 1 380 000
N-White: 5 056 000
Retail Price Index : 85,5
Wholesale Price Index : 102,6
G.D.P.
Pop.Total : 6 838 000
White : 1 500 000
N-White : 5 338 000
Retail Price Index : 145,8
Wholesale Price Index : 214,0
G.D.P.
First successful flight Cairo to Cape.
Vaal River Barrage.
ESCOM established
First radio broadcast in S.A., 18 December, 1923.
SAR. Open miles: 11 330 km.
Coal production: 6 452 000 m.t.
Elec. " :
SAR. Open Miles: 14 578 km.
Coal production: 7 512 000 m.t.
Elec. " : 940 million Kwh.
SAR. Open Miles : 15 443 km.
Coal production : 10 408 000 m.t.
Elect. " : 1 277 million Kwh.
Cement " :
Gold " : 8 158 000 oz.
Iron ore prod. : 7 512 m.t.
Mn " "
Iron ore prod. : 3 900 m.t.
Mn ore " : 400 m.t.
USCO established
USCO: first steel tapped
Pretoria Iron Mines: 1st. B.F. blown in.
Tvl. B.F. Coy.: 1st. B.F. blown in.
Rand Carbide est. Cartwright & Eaton established (later Dunswart).
Newcastle I & S Coy. established.
De.fos founds S.A. I & S Corp.
Gutehoffeungsmutte seed Commission
Iron & Steel Industry Encouragement Act.
Period of First World War

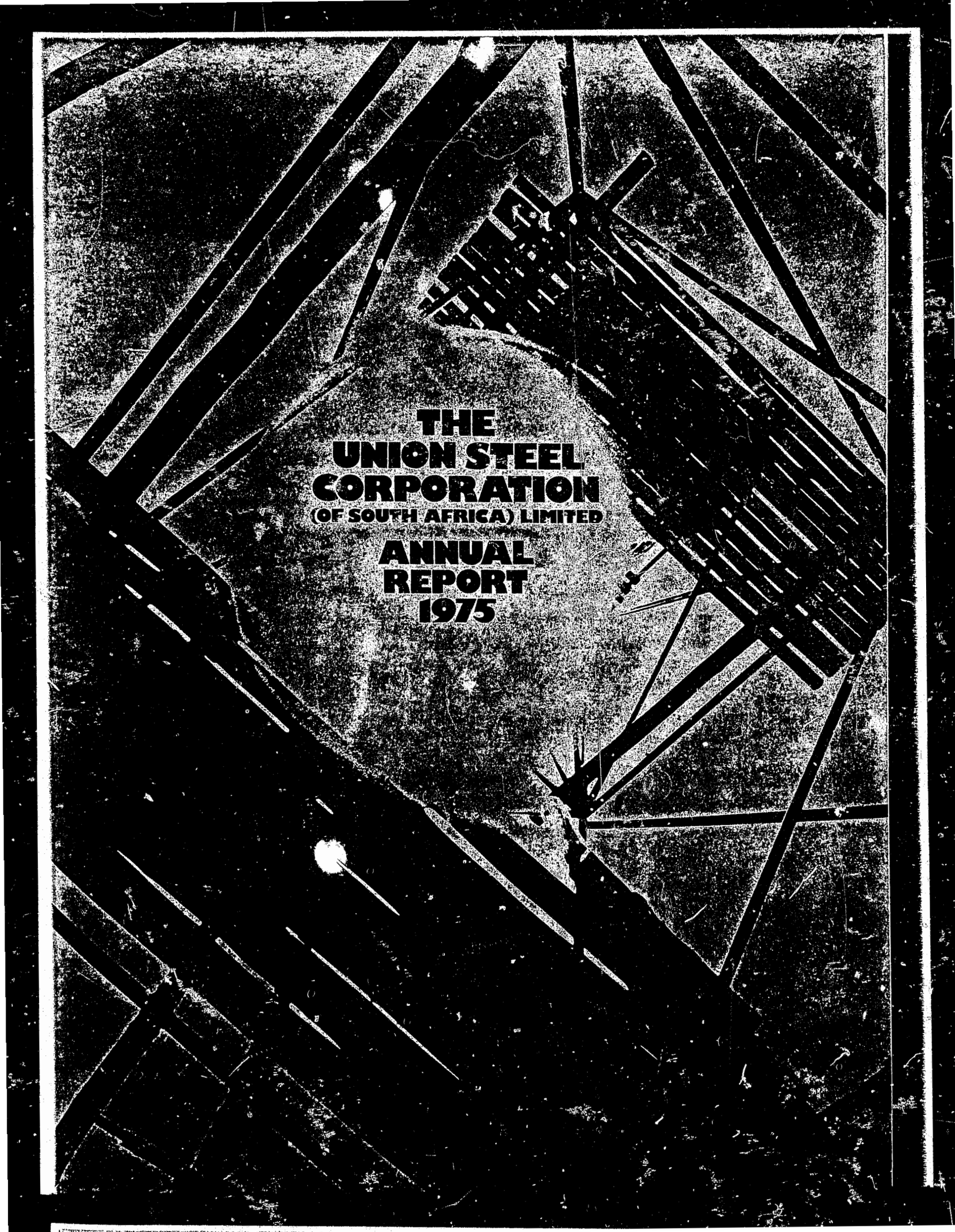

A STEEL CONSUMPTION 19
TONS)
1930
1935
1940
1945
1950
CALENDAR YEARS


Graph A
10 000
9 000
8 000
7 000
6 000
5 000
4 000
3 000
2 000
1 000
0
STEEL CONSUMPTION X 1 000 M TON
1955
1960
1965
1970
1975
1980
CALENDAR YEARS
Rand devalued 4,7%
22-6-74
Rand devalued 17,9%
22-9-75
Pact withdrawal of USA from Indochina. Take-over by Communist forces.
Mid-East war closure of Suez Canal.
Republican referendum, October 5, 1960.
Death of Dr. D.F. Malan.
Attempted assassination of Dr. Verwoerd.
Transkei Territorial self-government.
General election, Nat. Party achieves biggest majority in S.A. history.
General election, Nat. Party returned to power.
Coup d'état in Portugal: beginning of independence for Angola and Mozambique.
Republic of South Africa, May 31, 1961.
United Party unites Progressive Party formed.
British P.M., Mr. Macmillan's 'winds of change' speech in S.A. Parliament.
Dr. Verwoerd is assassinated. Mr. B.J. Vorster Prime Minister.
Drilling vessel, Elsmar Eirts strikes petroleum gas off Plettenberg Bay.
Unprecedented activity in S.A. ports as result of closure of Suez Canal.
Simonstown Naval Base officially handed over to South Africa
Commonwealth Prime Ministers' Conference. S.A. withdraws application for continued membership.
New nickel coinage for S.A.
Sterling control on imported consumer goods.
Synthetic Rubber Coy. est.
Tugela - Vaal Project.
Rand devalued by 12,28 %
Rand devalued by 4,1% linked to U.S. dollar.
Free market price of gold rises and falls, finally across above 120 dollars/oz.
Exports est.
Import est.
Isolation of Cabora Bassa vis-à-vis Africa by South African Govt.
Pop. Total : 16 000 000
White : 3 000 000
N-White : 13 000 000
Retail Price Index : 225
Wholesale Price Index : 280
G.D.P. : R 5 551 mill.
Pop. Total : 18 200 000
White : 3 700 000
N-White : 14 500 000
Retail Price Index : 104,7
Wholesale Price Index (1963 = 100) : 103,9
G.D.P. : R 7 448 mill.
Pop. Total : 31 500 000
White : 3 800 000
N-White : 17 700 000
Retail Price Index : 125,4
Wholesale Price Index : 111,2
G.D.P. : R 11 306 mill.
SAR: Open miles : 21 440 km.
Coal production : 37 200 000 m.t.
Elect. " : 32 400 mill. Kwh.
Cement " : 2 700 000 m.t.
Gold " : 20 100 000 oz.
SAR: Open miles : 21 715 km.
Coal production : 56 300 000 m.t.
Elect. " : 48 484 mill. Kwh.
Cement " : 3 400 000 m.t.
Gold " : 32 144 000 oz.
Iron ore prod. : 3 175 130 m.t.
Fe ore " : 998 000 m.t.
Iron ore prod. : 6 500 000 m.t.
Fe " : 3 000 000 m.t.
AE & CI prod. fertilizers
O.R.F.: White Paper published
Atlas Aircraft Corp. formed.
SAR: Open miles : 21 440 km.
Coal production : 32 100 000 m.t.
Elect. " : 32 172 mill. Kwh.
Cement " : 2 300 000 m.t.
Gold " : 14 600 000 oz.
ISCOR: Pretoria, B.F. No. 4 in production.
ANCOR forms Ferr-o-Met.
Rolled Steel Producers Co-ord. Council formed
RMB Alloys (Rand Mines) established
Transalloys (AAC) established
Thomson established
ISCOR: Vdb, B.F. C in Production
Southern Cross established
Highveld in production
ANCOR: expansion at Pretoria & Meyerton
Delta Mn. established
ISCOR: Tubes mill ANCOR (3 B.F.s)
Ferro Strap Distributors formed
Silicon smelters established
Palmiet Chrome established
Period of economic expansion: growth in net fixed investment, Steel; sustained growth in consumer demand. Growth factors operating within domestic economy.
Period of Reverse capital movements.
Period of consistent inflow of foreign capital.
Period of strong inflationary trends, domestic and international.



THE UNION STEEL CORPORATION

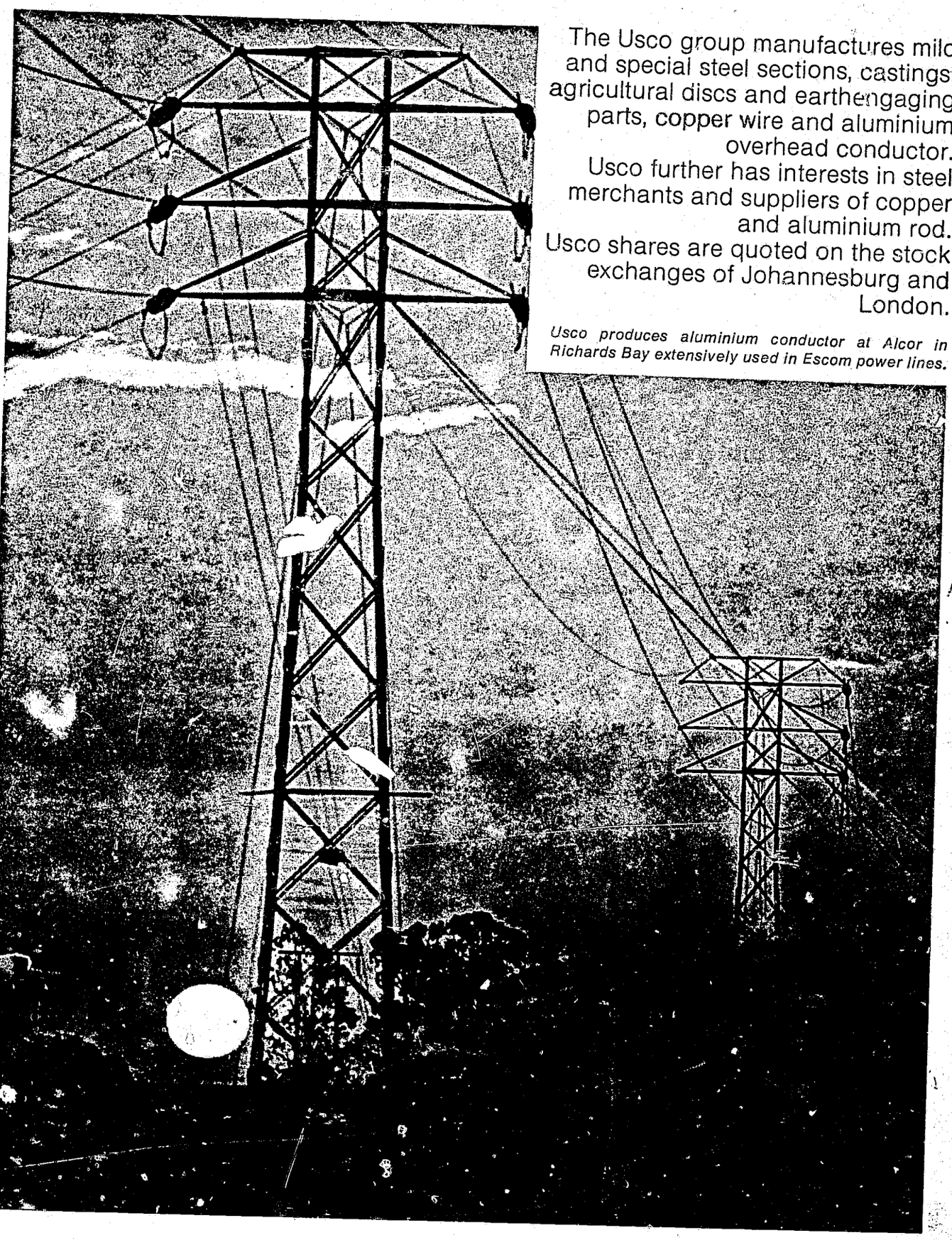
(OF SOUTH AFRICA) LIMITED



THE UNION STEEL CORPORATION (OF SOUTH AFRICA) LIMITED

ANNUAL REPORT 1975

USCO



The Usco group manufactures mild and special steel sections, castings, agricultural discs and earthengaging parts, copper wire and aluminium overhead conductor.
Usco further has interests in steel merchants and suppliers of copper and aluminium rod.
Usco shares are quoted on the stock exchanges of Johannesburg and London.

Usco produces aluminium conductor at Alcor in Richards Bay extensively used in Escom power lines.

The Union Steel Corporation

(of South Africa) Limited
(incorporated in the Republic of South Africa)

Sixty-fourth
Annual Report 1975

Contents

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Report of the Auditors	9
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Statement of Source and Application of Funds	13
Income Statement	14
Balance Sheet	15
Notes to the Annual Financial Statements	16
Group Five Year Review	22

Directors and Management

Directors
Dr. M. D. Marais (Chairman)
Prof. H. J. Samuels (Deputy Chairman)
J. P. Coetzee
E. P. Gush
W. J. Hefer
Prof. P. W. Hoek
H. C. H. Hutten (Executive Director)
S. B. Kossuth

Alternate Directors
H. J. Barnard
M. W. King
M. C. O'Dowd
D. J. Ritson

Executive Officers
J. C. de Waal (General Manager)
Dr. F. W. Güldenpfennig (Divisional Manager: Steel Manufacturing)
D. C. Odendaal (Divisional Manager: Finance and Administration)
J. C. Steenkamp (Divisional Manager: Personnel Services)
J. U. van Wyk (Divisional Manager: Usco Subsidiaries)
J. H. Vorster (Technical Manager)

Secretary
R. J. van Jaarsveld,
P.O. Box 48,
General Hertzog Road,
Vereeniging 1930.

London Secretaries
Anglo American Corporation of South Africa Limited,
40 Holborn Viaduct,
London, E.C.1.

Transfer Secretaries
Consolidated Share Registrars Limited,
62 Marshall Street, Johannesburg 2001.

Bankers
Barclays National Bank Limited
Volkskas Limited

Auditors
Deloitte & Co., Johannesburg

Registered Office
P.O. Box 48, General Hertzog Road, Vereeniging 1930.

Notice to Ordinary Shareholders

Notice is hereby given that a meeting of the ordinary shareholders of the Corporation will be held in the boardroom of the Corporation, General Hertzog Road, Vereeniging, on 22nd June, 1976 at 12h00 for the following purposes:

To elect two directors in place of Messrs. H. C. H. Hutten and E. P. Gush, both of whom retire in accordance with Article 100 (a) of the Corporation's Articles of Association, but being eligible, offer themselves for re-election.

A shareholder with an ordinary vote, entitled to attend and vote at the above-mentioned meeting is entitled to appoint a proxy to attend and vote and speak in his stead. A proxy need not be a shareholder of the Corporation. Shareholders desirous of lodging a proxy must lodge same at the Corporation's registered office or at its London office not later than 48 hours before the date of the meeting. The transfer registers of the Corporation, both in Johannesburg and London, will be closed from the 14th June, 1976 to the 22nd June, 1976, both days inclusive.

For and on behalf of the Board,
R. J. van Jaarsveld,
Secretary

24th February, 1976.

Notice to Shareholders

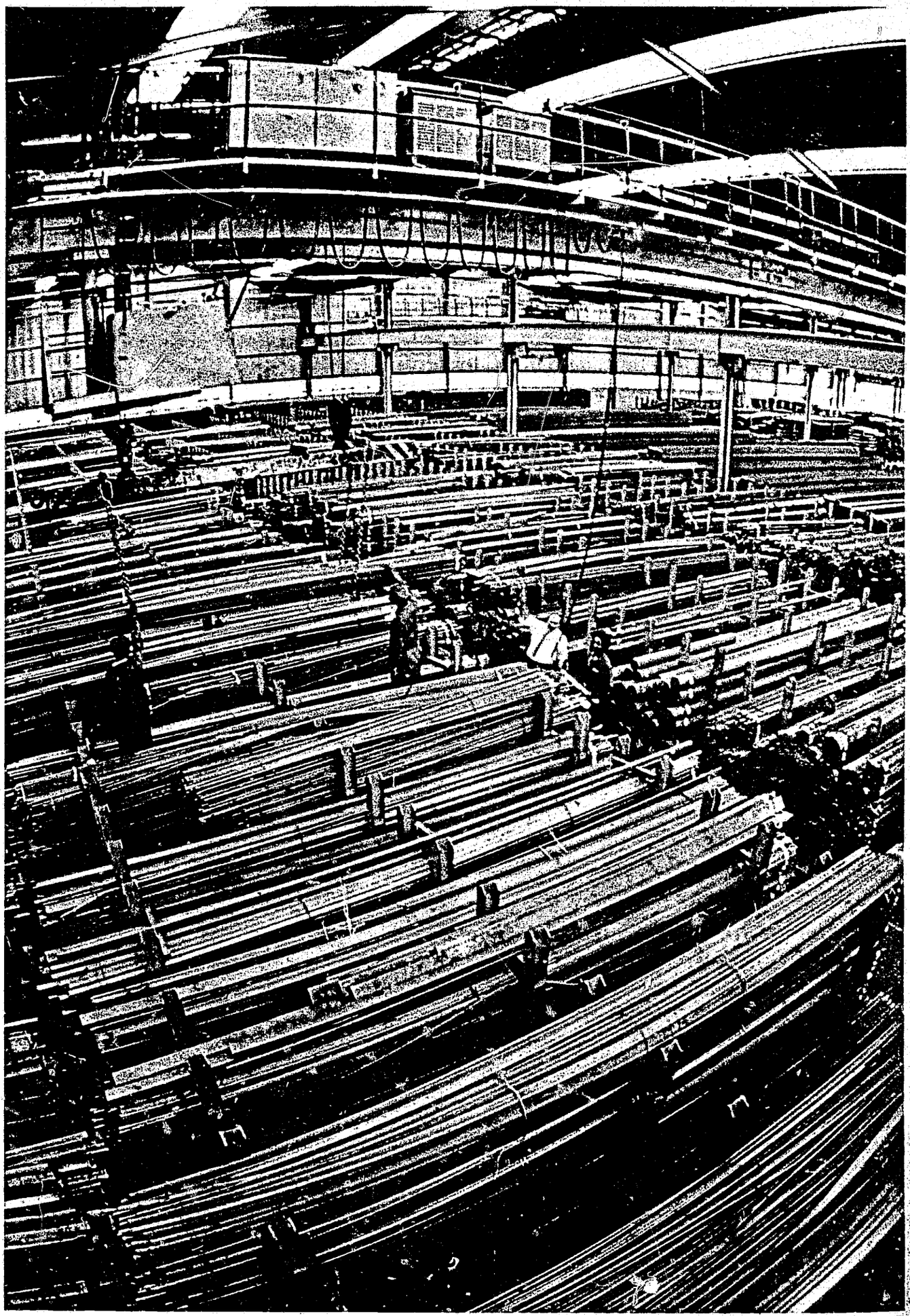
Notice is hereby given that the sixty-fourth ordinary general meeting of shareholders of the Corporation will be held in the boardroom of the Corporation, General Hertzog Road, Vereeniging, on 22nd June, 1976, at 12h05 for the following purposes:

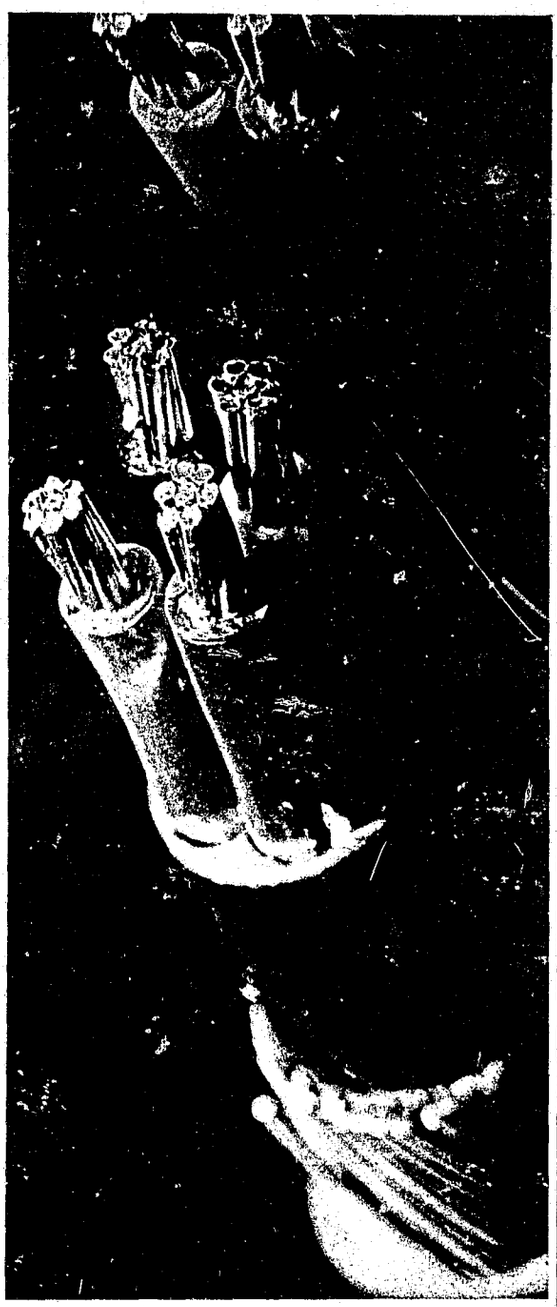
1. To receive and consider the financial statements for the year ended 31st December, 1975.
2. To transact any other business that may be transacted at an ordinary general meeting of shareholders of the Corporation.

A shareholder entitled to attend and vote at the above-mentioned meeting is entitled to appoint a proxy to attend and vote and speak in his stead. A proxy need not be a shareholder of the Corporation. Shareholders desirous of lodging a proxy must lodge same at the Corporation's registered office or at its London office not later than 48 hours before the date of the meeting. The transfer registers of the Corporation, both in Johannesburg and London, will be closed from the 14th June, 1976 to 22nd June, 1976, both days inclusive.

For and on behalf of the Board,
R. J. van Jaarsveld,
Secretary

24th February, 1976.



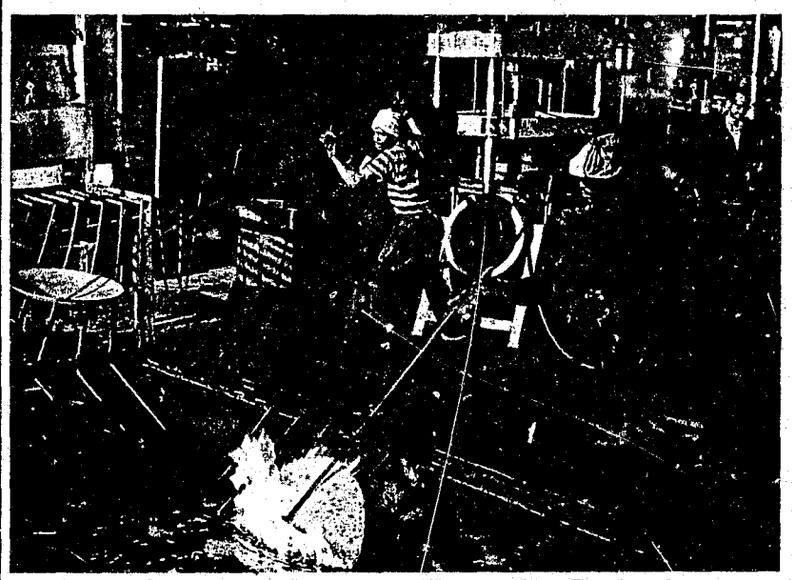


Right: A stockpile of castings made at the Vaal Works in Vereeniging.

Left: Warehouse at Namascor, Alberton, where steel is processed and stored before marketing.

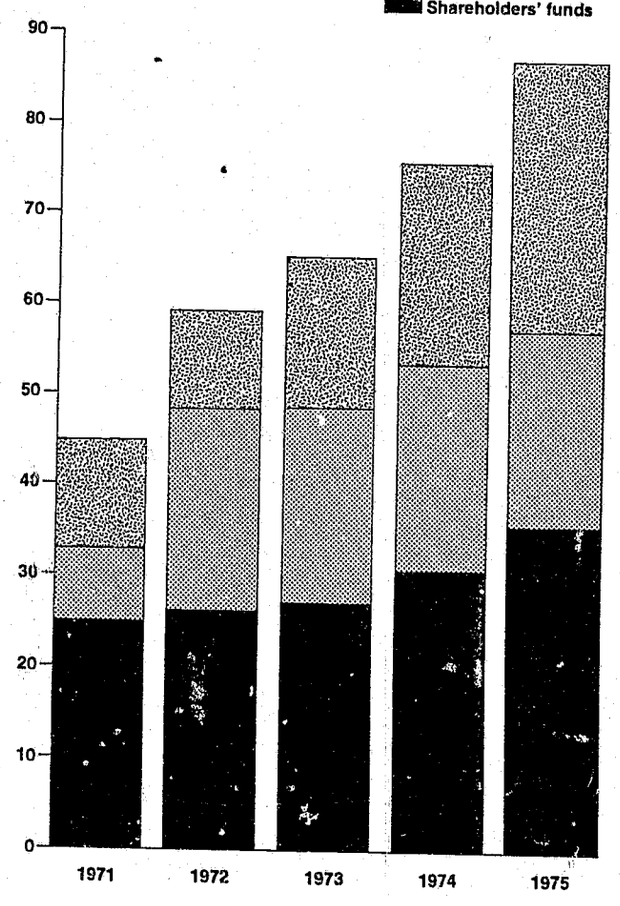
Copper cable produced by Usco for the electrical industry.

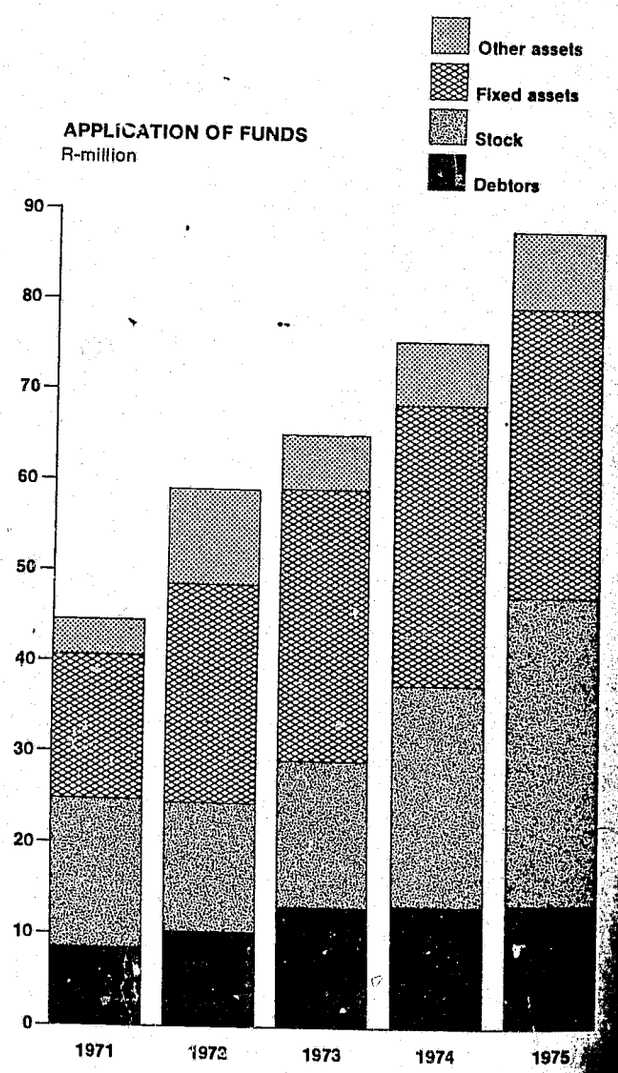
Agricultural discs are quenched at the Vereeniging Veldmaster factory. Largely for the export market.



Group Financial Highlights

	1975	1974
OPERATING SUMMARY		
Total sales	135 442 000	134 010 000
Profit before tax	9 900 000	6 248 000
Profit after tax	6 298 000	5 226 000
FINANCIAL SUMMARY		
Working capital	19 224 000	17 136 000
Net fixed assets	31 754 000	31 078 000
Other assets	6 216 000	5 513 000
Long-term borrowings	19 816 000	21 258 000
Shareholders' funds	35 476 000	30 812 000
KEY DATA		
Net worth per ordinary share	120,57c	104,49c
Earnings per ordinary share	21,52c	17,86c
Current ratio	1,6:1	1,8:1





Chairman's Statement

RESULTS

The Corporation's group profit exceeded last year's figure, as well as the forecast for this year. The improved profit situation is due mainly to the following factors:

1. Increased contribution of steel products to group profits. Despatches of steel products were maintained, with a marked improvement in the mix of sales and a shift of emphasis to special steels. Price increases in January and June in respect of controlled products contributed towards combating cost increases.
2. The contribution of castings to group profits is substantially higher as a result of greater efficiency and increased despatches.
3. Aluminium's profits for the year reflected a satisfactory increase and despatches exceeded those of the previous year.
4. Tonnages of copper products sales were higher than those of the previous year, but world prices were considerably lower. These lower market prices caused the rand value of copper turnover to drop by R22-million. Profitability was, however, maintained.
5. Other products and subsidiary companies performed as expected, although Veldmaster showed a loss as a result of the delay in commissioning the new plant.

   Although unprecedented floods occurred during February 1975, and some production units of Vaal Works were unproductive for a considerable period, the resultant losses and damage to the recreation club were recovered from insurance.

PROSPECTS

I do not envisage an upsurge in the South African economy for at least another two years. Our major trade partners such as the USA, Britain, France, Germany and Japan still show considerable unemployment figures. The South African economy will not be able to recover, until the economies of these countries have revived. Imported inflation, especially in the wake of the recent devaluation of the rand, will remain our greatest cost problem. The Corporation is dependent on imported equipment for its expansion and modernisation programmes, resulting in unavoidable increased capital costs.

The profit budget for the year is on a somewhat lower level. Certain products in Usco's steel range, such as rod and hollow drill steel, reflected decreases during the second half of 1975, which will continue during 1976. In addition an imbalance is experienced in the demand for steel, which causes overloading of certain plants while others' production is below capacity. In the light of the government's anti-inflation campaign it is doubtful whether a general increase in the price of steel will be granted this year. This will inevitably influence the profitability of steel adversely, because uncontrollable cost increases are still experienced.

The prospects for aluminium, copper and Veldmaster products are encouraging and adequate orders are on the books to keep the plants fully occupied for the year.

The Corporation is proceeding with its expa[illegible] programme as planned, although it has been limited to essential projects. The Board has authorised the expansion of the foundry's capacity in order to increase production. Good progress is being made with the electroslag refining plant and forge press, which will be commissioned in 1976. This will enable the Corporation to satisfy the demand for castings and special tool steels to a great extent and render South Africa less dependent on overseas supplies.

Capital expansion projects will be financed partly from cash flow and partly from medium-term loans.

An exceptional chapter in the history of the Corporation was the closing down of the old open-hearth furnaces at Vaal Works, which were in operation for 60 years. This was made possible by the planned switching to the production of molten steel in the new electric furnaces. In this way the Corporation has eliminated a major source of air pollution in Vereeniging. At the same time two old mills were close[illegible] and production was switched to the new mills.

The Vaal Works premises are fully developed and to accommodate future extensions an adjoining stand of 18ha was acquired at a reasonable price.

MANAGEMENT AND PERSONNEL

The most important factor in combating inflation is higher productivity from management as well as from staff. This fact has been brought very pertinently to the attention of all personnel and increases are granted on merit. Training of all workers is stressed throughout with special attention being given to lower job grades. Operators are encouraged as far as possible to register as adult artisans in order to qualify eventually as artisans. A shortage of artisans was still experienced during 1975 and a successful recruiting campaign was launched overseas to supplement the shortage.

The Corporation's pension fund was improved during 1975, especially to make provision for the impact of inflation on pension benefits. This meant increased contributions by the Corporation as well as from employees.

The Corporation maintained good relations with the employees. The liaison committees fulfilled a superb function as communication link between management and Black workers. A regulated organisational structure was instituted for Black workers, laying down a definite line for promotion.

In addition a study loan scheme was established for our Black workers which will enable their children to acquire higher qualifications.

ACKNOWLEDGEMENTS

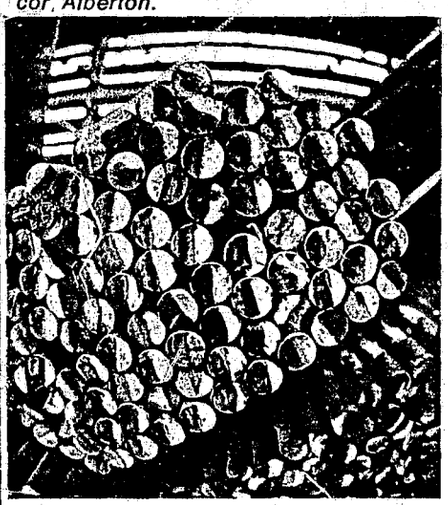
I wish to thank my co-directors for their outstanding loyalty and exceptional co-operation. On behalf of the board of directors, my heartfelt appreciation to the executive director, Mr. Hubert Hutten, the general manager, Mr. J. de Waal, the management and staff for their diligence, dedication and perserverance. The successful year we have just completed has once again shown that close correlation between official management and loyal performance on the part of the work force on the one hand, and good results on the other, exist.

M. D. Marais
Chairman

24th February 1976.

Usco hollow drill steel is used in the manufacture of drills for the mining industry.

A stockpile of Usco steel rods at Namascor, Alberton.



The hammer shop at Vereeniging where high quality steel is forged.

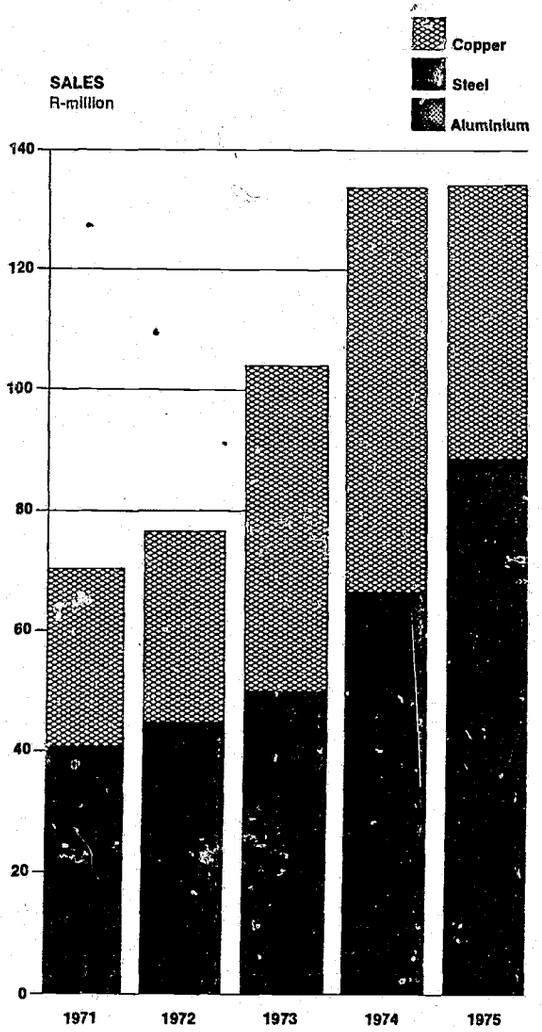
Group Annual Financial Statements

for the year ended 31st December, 1975

The group annual financial statements which appear on pages 10 to 21 were approved by the Board of Directors on 24th February, 1976 and are signed on its behalf by

M. D. Marais,
Chairman

J. P. Coetzee,
Director



Report of the Auditors

To the Members of the Union Steel Corporation (of South Africa) Limited

We have examined the annual financial statements set out on pages 10 to 21 and in our opinion, based on our examination and the reports of the auditors of certain subsidiaries not audited by us, these statements fairly present the financial position of the Corporation and its subsidiaries and the results of their operations in the manner required by the Companies Act, 1973.

We are in agreement with the decision of the directors not to consolidate a subsidiary company for the reason given in note 9.

Deloitte & Co.,

Chartered Accountants (S.A.)
Johannesburg.
24th February, 1976.

Report of the Directors

Your directors hereby submit the annual report and audited financial statements for the year ended 31st December, 1975.

GROUP RESULTS

The profit attributable to shareholders of Usco, after taxation, amounted to R6 298 000, which is R1 072 000 higher than that of the previous year. Turnover increased from R134 010 000 to R135 442 000, while earnings per ordinary share increased from 17,86 cents to 21,52 cents.

The rand value of turnover increased marginally. Although copper turnover increased in volume, it decreased in value by R22 million, as a result of a substantial drop in world market prices. The increased sales of other products, i.e. aluminium, steel and castings, exceeded this decrease.

Operating profit increased from R11 899 000 to R16 476 000, to which the major contributors were aluminium products and castings. Interest paid decreased by R363 000, as a result of lower interest rates on local and overseas short-term loans.

The proportion of profits before tax attributable to the various classes of business were:

	1975	1974
Steel Division	**6 213 000**	4 673 000
Non-ferrous Division	**3 687 000**	1 575 000
	R9 900 000	R6 248 000

GROUP ACTIVITIES

Steel

Usco manufactures mild steel sections, special steels and castings. Despatches of all steel products for the year increased by 5 000 tonnes to 296 000 tonnes. The new mill at Vaal Works which was commissioned during the second half of last year could not, as a result of technical problems, produce the expected volume. The steel price increases granted during January and June by the Government contributed towards absorbing the uncontrollable cost increases, particularly in respect of labour, alloys, refractories and raw materials.

Copper

This division obtains its copper rod from Transvaal Copper Rod Company. The rod is drawn into wire and strip, while some wire is further processed into conductor strands. Copper increased its contribution to group profits, as a result of increased despatches on own production.

Usco Aluminium Corporation (Pty) Limited

The plant is situated at Richards Bay and the company manufactures bare aluminium overhead conductor for transmission of electricity. The company enjoyed a successful year and exceeded its contribution of last year, mainly as a result of better utilisation of plant capacity. The demand for conductor remained on a high level.

Veldmaster (Pty) Limited

Manufacturer of agricultural discs and earthengaging parts. The major part of the production is exported. The company operated at a loss for the year, as a result of a delay in commissioning the new plant, which was caused by the late delivery of equipment from overseas. The new plant will enable Veldmaster to increase its sales in the overseas markets. This benefit will be exploited during 1976 and it will place the company on a profitable basis.

Usco Cable Company (Pty) Limited

This company manufactures armoured cable according to SABS standards for the electrical industry. The company operated profitably during the year.

Transvaal Copper Rod Company

The function of this joint venture between Usco and Palabora Mining Company is to process molten copper, supplied by Palabora Mining Company, into rod which is sold exclusively by Usco. This undertaking maintained its profitability at a satisfactory level throughout the year.

National Materials Service Corporation (Pty) Limited

This joint venture between Usco and Klöckner Nederland B.V. operates as a steel merchant and service centre. The demand for the company's products was at a high level during the year and it had its most successful year since its formation. Profits substantially exceeded those of the previous year.

Hall & Pickles (Coastal) (Pty) Limited

This company operates as a special steels merchant in Durban and Port Elizabeth. The output of the centres was higher and profitability met targets.

Veldmaster (Rhodesia) (Pvt) Limited

This company which manufactures agricultural discs in Rhodesia maintained its profitability.

Veldmaster Incorporated (U.S.A.)

Continuity in representing the products of Veldmaster (S.A.) in the American market, is of fundamental interest to Veldmaster. Towards this end, the organisation of the agent representing Veldmaster in the U.S.A. for the past five years was taken over with effect from 1st July, 1975, and its name was changed to Veldmaster Incorporated. The results since acquisition have been satisfactory.

Alustang (Pty) Limited

Manufacturer of aluminium rod for production of overhead conductor at Richards Bay. The company is jointly owned by Usco, Aberdare Cables Limited and Alusaf (Pty) Limited. This company declared a dividend during the year. The demand for rod remained at a high level and profitability was satisfactory.

Usko Huiseienaars (Pty) Limited

This company provides housing for the employees of the Corporation at Vereeniging. Housing benefits are available in the form of guarantees to building societies enabling employees to own their own homes at subsidised interest rates. In addition, rented units are provided. In order to provide for an urgent need, a block of flats was purchased during the year. The building programme of houses in Sonlandpark has been completed and the houses are available to employees.

Report of the Directors

Usco Housing (Richards Bay) (Pty) Limited
This company makes available dwelling houses to employees of Usco Aluminium Corporation at Richards Bay.

CONSOLIDATED BALANCE SHEET
The total capital employed at the end of the financial year was R57 194 000 (1974–R53 727 000) of which approximately 75 per cent was employed in the steel division and 25 per cent in the non-ferrous division. The total capital expenditure for the year amounted to R4 982 000 (1974–R3 825 000) and was mainly allocated for the new Veldmaster plant and the commencement of the electro-slag refining plant and forge press. In addition commitments for capital expenditure at the year-end amounted to R4 546 000 (1974–R3 319 000) while your directors have approved further expenditure in the amount of R1 463 000 (1974–R4 798 000). These amounts will be mainly spent to complete the electro-slag refining plant and forge press, as well as for extending the capacity of the foundry for the manufacture of manganese castings. Stocks at R33 466 000 reflected an increase of R9 173 000 over 1974. The increase in the stock value of raw materials is due, among other things, to temporary essential stock-piling, as well as to considerable price increases during the past year.

SHARE CAPITAL
The authorised and issued share capital of the Corporation remained unchanged at R15 005 000, divided into 29 010 000 ordinary shares of 50 cents each, 125 000 preferent "A" shares of R2 each and 125 000 preferent "B" shares of R2 each, all fully paid-up.

FINANCE
The fund requirements of the Group remain at a high level, in particular with regard to working capital. As a result of a satisfactory cash flow during the year, combined with adequate borrowing facilities, it was possible to meet all demands. The increased exports of agricultural discs and parts to the U.S.A. required additional working capital. To meet this demand an export discounting facility was arranged.

DIVIDENDS
Dividends declared during the year amounted to 22 cents per R2 share in respect of the cumulative participating preferent "A" and "B" shares.

An ordinary dividend of 5,5 cents per share was declared on 24th February, 1976, payable to ordinary shareholders registered on 12th March, 1976, and dividend coupons will be posted on or about 15th April, 1976.

BOARD OF DIRECTORS
There was no change in the composition of the Board of Directors during the year.

SECRETARY
Mr. R. J. van Jaarsveld holds the position of Secretary of the Corporation. His business address is General Hertzog Road, Vereeniging, and his postal address is P.O. Box 48, Vereeniging, 1930.

	1975 R'000	1974 R'000
GROUP PROFIT AND APPROPRIATIONS		
Profit for the year after taxation	6 298	5 110
Add Outside shareholder's share of loss in a subsidiary company	–	116
Profit attributable to shareholders of Usco	6 298	5 226
Add Retained income at beginning of the year	904	1 028
Available for appropriation	7 202	6 254
Your Directors have allocated this total as follows:		
Dividends	1 651	1 350
Transfer to reserve for replacement of fixed assets	3 000	3 000
Transfer to general reserve	1 000	1 000
	5 651	5 350
Retained income at end of the year	1 551	904
	7 202	6 254

Report of the Directors

INFORMATION IN RESPECT OF SUBSIDIARY COMPANIES

Interest in subsidiaries

			Usco interest at book value			
			Shares		Indebtedness	
	Issued Capital	Usco Interest	**1975**	1974	**1975**	1974
Name of Subsidiary	R		**R**	R	**R**	R
Incorporated in the Republic						
Usco Aluminium Corporation (Pty) Limited	3 000 000	100%	**3 000 000**	3 000 000	**195 115**	342 922
Veldmaster (Pty) Limited	200 000	100%	**–**	303 391	**4 800 385**	3 908 637
Usco Cable Company (Pty) Limited	500 000	100%	**–**	–	**1 280 192**	912 074
Usco Housing (Richards Bay) (Pty) Limited	150 000	100%	**130 314**	128 837	**23 955**	31 927
Usko Huiseienaars (Pty) Limited	4	100%	**–**	–	**2 084 549**	1 811 701
Usco Aluminium Systems (Pty) Limited	100	100%	**100**	100	**(100)**	(100)
Incorporated in the USA						
Veldmaster Incorporated	$25 000	100%	**598 803**	–	**(109 766)**	–
			3 729 217	3 432 328	**8 274 330**	7 007 161

Usco's interest in subsidiary companies is reflected at cost less provision for losses in subsidiaries.

The issued share capital of the subsidiaries remained unchanged during the year.

Usco increased its interest in Usco Cable Company (Pty) Limited to 100% (1974–51%).

Aggregate amount of Usco's share of profits and losses after tax in consolidated subsidiaries	**1975 R'000**	1974 R'000
Aggregate profits of subsidiaries	**1 737**	957
Aggregate losses of subsidiaries	**568**	675

DIRECTORS' SHAREHOLDINGS

On 31st December, 1975, and up to the date of this report, the directors and their families held beneficially a total of 2 500 (1974–2 500) ordinary shares in the Corporation.

On the same dates their interests as nominees were 12 000 (1974–12 000) ordinary shares.

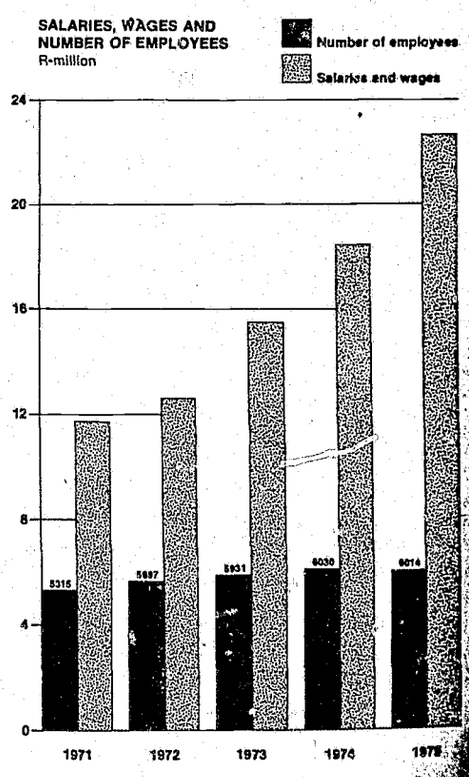
HOLDING COMPANY

Iscor is the Corporation's holding company on the strength of the majority voting power vested in the preferent shares.

M. D. Marais
Chairman

J. P. Coetzee
Director

24th February, 1976.



Statement of Source and Application of Funds

for the year ended 31st December 1975

	USCO R'000	GROUP R'000
SOURCE OF FUNDS		
Profit for the year	7 705	9 900
Depreciation and other amounts written off	3 436	3 813
FUNDS DERIVED FROM OPERATIONS	11 141	13 713
Disposal of fixed assets	14	675
Payments received – long-term debtors	–	360
Long-term borrowings raised	1 907	2 136
TOTAL SOURCE OF FUNDS	13 062	16 884
APPLICATION OF FUNDS		
Purchase of fixed assets	4 194	4 982
Repayment of long-term borrowings	140	166
Increase in unlisted investments	74	74
Increase in interest in subsidiary companies	1 564	489
Advances to long-term debtors	–	665
Taxation	2 220	3 357
Dividends	1 651	1 651
Transfer to short-term borrowings	2 903	3 412
Net increase in working capital	316	2 088
TOTAL APPLICATION OF FUNDS	13 062	16 884
CHANGES IN WORKING CAPITAL		
Increase stock	5 745	9 173
Increase funds at call	551	551
Increase debtors	(34)	118
Decrease short-term borrowings	853	1 356
INCREASE IN WORKING CAPITAL	7 115	11 198
Decrease bank and cash	16	16
Increase bank overdraft	347	348
Increase shareholders for dividends	301	301
Increase creditors	3 232	5 033
Transfer from long-term borrowings	2 903	3 412
DECREASE IN WORKING CAPITAL	6 799	9 110
NET INCREASE IN WORKING CAPITAL	316	2 088

Income Statement

for the year ended 31st December 1975

	Note	USCO 1975 R'000	USCO 1974 R'000	GROUP 1975 R'000	GROUP 1974 R'000
TURNOVER	1	**114 451**	121 178	**135 442**	134 010
OPERATING PROFIT	14	**12 952**	10 933	**16 476**	11 899
Income from investments	16	**391**	554	**391**	554
Income from subsidiary companies	17	**1 251**	903	**–**	–
Depreciation		**3 353**	2 313	**3 721**	2 683
Interest paid on borrowings	18	**2 984**	3 397	**3 159**	3 522
Provision for losses in subsidiary companies		**465**	469	**–**	–
Amount written off shares in subsidiary company	1	**87**	–	**87**	–
PROFIT BEFORE TAXATION		**7 705**	6 211	**9 900**	6 248
Taxation	19	**2 451**	930	**3 602**	1 138
PROFIT AFTER TAXATION		**5 254**	5 281	**6 298**	5 110
Outside shareholder's share of loss in a subsidiary		**–**	–	**–**	116
GROUP PROFIT		**5 254**	5 281	**6 298**	5 226
Retained income at beginning of the year		**679**	748	**904**	1 028
AVAILABLE FOR APPROPRIATION		**5 933**	6 029	**7 202**	6 254
Dividends	20	**1 651**	1 350	**1 651**	1 350
Transfer to distributable reserves	4	**4 000**	4 000	**4 000**	4 000
RETAINED INCOME AT END OF THE YEAR		**282**	679	**1 551**	904

Balance Sheet

31st December 1975

	Note	USCO 1975 R'000	USCO 1974 R'000	GROUP 1975 R'000	GROUP 1974 R'000
CAPITAL EMPLOYED					
Ordinary share capital	2	14 505	14 505	14 505	14 505
Distributable reserves	3	19 094	15 491	20 471	15 807
ORDINARY SHAREHOLDERS' FUNDS		33 599	29 996	34 976	30 312
Preferent share capital	2	500	500	500	500
TOTAL SHAREHOLDERS' FUNDS		34 099	30 496	35 476	30 812
Deferred taxation		1 715	1 484	1 902	1 657
Long-term borrowings	5	16 414	17 550	19 816	21 258
TOTAL CAPITAL EMPLOYED		52 228	49 530	57 194	53 727
EMPLOYMENT OF CAPITAL					
FIXED ASSETS	6	25 299	24 472	31 754	31 078
INVESTMENTS	8	2 781	2 707	2 781	2 707
SUBSIDIARY COMPANIES	9	12 004	10 440	489	–
LONG-TERM DEBTORS	10	–	–	2 040	1 808
CURRENT ASSETS					
Stock	11	25 933	20 188	33 466	24 293
Debtors		9 594	9 628	13 507	13 389
Funds at call and on deposit		1 935	1 384	2 041	1 490
Bank balances and cash		62	78	62	78
TOTAL CURRENT ASSETS		37 524	31 278	49 076	39 250
CURRENT LIABILITIES					
Bank overdraft		4 693	4 346	4 694	4 346
Short-term borrowings		10 050	8 000	10 560	8 504
Creditors		8 339	6 579	10 668	7 834
Taxation		1 539	67	2 299	100
Shareholders for dividends		1 631	1 330	1 631	1 330
TOTAL CURRENT LIABILITIES		26 252	20 322	29 852	22 114
NET CURRENT ASSETS		11 272	10 956	19 224	17 136
DEFERRED EXPENDITURE	12	872	955	906	998
TOTAL EMPLOYMENT OF CAPITAL		52 228	49 530	57 194	53 727

Notes to the Annual Financial Statements

31st December 1975

1. ACCOUNTING POLICIES

The principal accounting policies of the Group as set out below have in all material aspects been consistently followed.

Consolidation principles

The consolidated financial statements incorporate the results and financial position of the company and all its subsidiaries except that subsidiary referred to in note 9.

The results of subsidiaries are included from the effective dates of acquisition.

The excess of cost of shares in each subsidiary over net assets thereof at date of acquisition is written off over a period which is considered appropriate to the particular investment.

Foreign currency

Foreign assets and liabilities which are covered by foreign exchange contracts are converted at the contracted rates. Other foreign assets and liabilities are converted at rates of exchange approximating those ruling at the year-end.

Turnover

Turnover represents total net invoiced sales, excluding intercompany transactions.

Depreciation

Depreciation is not provided on industrial and housing properties and capital extensions under construction.

Depreciation on other fixed assets is provided on the reducing balance or straight line method at rates which are calculated to reduce the book values of the assets to estimated residual values over their expected useful lives.

Taxation

Normal taxation is determined on the profit for the year, after taking into account investment and initial allowances on capital expenditure, border area allowances and tax losses brought forward from prior years.

Provision is made for deferred taxation at current tax rates for the potential tax liability arising from instances in which income and expense items are recognised for tax purposes in different financial periods.

Stock

Raw materials and consumable stores are valued at the lower of cost (determined on a first-in, first-out basis) and replacement value.

Finished goods and work in progress are valued at the lower of standard cost and net realisable value. Standard cost comprises the cost of raw materials, direct and indirect overhead expenses and approximates cost determined on a first-in, first-out basis.

Provision is made for obsolete and slow-moving stocks.

	USCO		GROUP	
	1975 R'000	1974 R'000	**1975** R'000	1974 R'000
2. SHARE CAPITAL authorised, issued and fully paid				
125 000 Preferent "A" shares of R2 each	**250**	250	**250**	250
125 000 Preferent "B" shares of R2 each	**250**	250	**250**	250
	500	500	**500**	500
29 010 000 Ordinary shares of 50c each	**14 505**	14 505	**14 505**	14 505
	15 005	15 005	**15 005**	15 005
3. DISTRIBUTABLE RESERVES				
Reserve for replacement of fixed assets	**10 552**	7 552	**10 620**	7 603
General reserve	**8 260**	7 260	**8 300**	7 300
Retained income	**282**	679	**1 551**	904
	19 094	15 491	**20 471**	15 807
4. MOVEMENTS ON DISTRIBUTABLE RESERVES				
Transfer to reserve for replacement of fixed assets	**3 000**	3 000	**3 000**	3 000
Transfer to general reserve	**1 000**	1 000	**1 000**	1 000
	4 000	4 000	**4 000**	4 000
Excess provision for depreciation due to revaluation of plant in a subsidiary company, transferred to reserve for replacement of fixed assets on consolidation	**–**	–	**17**	
	4 000	4 000	**4 017**	4 0

Notes to the Annual Financial Statements

	USCO		GROUP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
5. LONG-TERM BORROWINGS				
5.1 **Overseas loans**				
Revolving credit loan. The facility of this loan will decrease by fifty per cent on 6th February 1977, and the balance on 6th February 1978. Current effective interest rate 7,62 per cent per annum, reviewed three or six monthly. This loan is covered by a forward exchange contract and the effective interest rate includes the cost of this coverage.	5 814	5 954	5 814	5 954
Fixed term loan repayable in two equal instalments on 7th November 1976, and 7th November 1977. Effective interest rate 10 per cent per annum. This loan is covered by a forward exchange contract and the effective interest rate includes the cost of this coverage.	5 633	5 633	5 633	5 633
Fixed term loan repayable in eighteen equal quarterly instalments of R21 794 ending 30th June 1980. Current interest rate 7,25 per cent per annum reviewed quarterly	392	–	392	–
5.2 **Local loans**				
Fixed term loan repayable in three equal annual instalments from 1st June 1979. Interest rate 9,5 per cent per annum	4 000	4 000	4 000	4 000
Fixed term loan repayable in two equal instalments on 1st October 1978 and 1st October 1979. Interest rate 12,5 per cent per annum	1 800	1 800	1 800	1 800
Fixed term loan repayable in fifty nine equal monthly instalments of R16 700 and a final instalment of R14 700. The first instalment is due on 1st January 1977. Current interest rate 10 per cent per annum reviewed quarterly	1 000	–	1 000	–
Fixed term loan repayable within ten years from 1976. This amount represents advance payments received on the loan. The total amount of the loan and instalments is subject to negotiation	678	163	678	163
5.3 **Border area loans to subsidiary companies guaranteed by Usco**				
No. 1 to a subsidiary company in respect of land and buildings, repayable in twenty eight equal quarterly instalments of R65 750. Interest free to 28th October 1976 and thereafter at 6 per cent per annum	–	–	1 841	2 104
No. 2 to a subsidiary company in respect of plant and machinery, repayable in twenty equal quarterly instalments of R52 187. Interest at 4 per cent per annum to 28th October 1976 and thereafter at 6 per cent per annum	–	–	1 044	1 253
Housing loans repayable in equal monthly instalments of R5 261 (including interest) over twenty years terminating 1992. Current interest rate 6 to 6,75 per cent per annum. These loans are secured by first mortgage bonds over housing properties	–	–	644	681

Notes to the Annual Financial Statements

	USCO		GROUP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
5.4 Other housing loans				
Secured–No. 1 repayable in equal monthly instalments of R2 646 (including interest) terminating 2003. Current interest rate 10,5 to 12,0 per cent per annum. Secured by first mortgage bonds over housing properties	–	–	251	110
No. 2 repayable in equal monthly instalments of R1 010 (including interest) terminating 1987. Current interest rate 12,0 per cent per annum. Secured by first mortgage bond over the property	–	–	75	–
Unsecured–repayable in equal monthly instalments of R824 (including interest) terminating 1982. Interest rate 6,5 per cent per annum	–	–	56	63
	19 317	17 550	23 228	21 761
Less instalments repayable within one year included in short-term borrowings	2 903	–	3 412	503
	16 414	17 550	19 816	21 258
6. FIXED ASSETS				
6.1 Cost				
Industrial property and improvements thereto	131	131	939	901
Industrial buildings and sidings	10 020	9 694	12 131	11 806
Housing properties	267	267	1 403	1 257
Plant and machinery	40 847	37 981	44 765	41 833
Office furniture, equipment and motor vehicles	672	629	714	671
Capital extensions under construction	1 859	941	1 990	1 123
	53 796	49 643	61 942	57 591
6.2 Accumulated depreciation				
Industrial property and improvements thereto	79	79	79	79
Industrial buildings and sidings	4 768	4 491	5 119	4 754
Housing properties	188	184	188	184
Plant and machinery	23 025	20 012	24 340	21 071
Office furniture, equipment and motor vehicles	437	405	462	425
Capital extensions under construction	–	–	–	–
	28 497	25 171	30 188	26 513
6.3 Book value				
Industrial property and improvements thereto	52	52	860	822
Industrial buildings and sidings	5 252	5 203	7 012	7 052
Housing properties	79	83	1 215	1 073
Plant and machinery	17 822	17 969	20 425	20 762
Office furniture, equipment and motor vehicles	235	224	252	246
Capital extensions under construction	1 859	941	1 990	1 123
	25 299	24 472	31 754	31 078

6.4 Plant and buildings of certain subsidiary companies (book value R4 195 000; 1974–R4 473 000) have been erected on land purchased by the subsidiary companies but which has not been registered in their names.

6.5 Housing properties with a book value of R986 000 (1974–R683 000) are subject to first mortgage bonds in favour of housing loan creditors.

6.6 Fixed asset registers dealing with property and buildings are available for inspection by members or their duly authorised representatives at the registered office of the Corporation.

Notes to the Annual Financial Statements

	USCO		GROUP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
7. COMMITMENTS				
Capital expenditure contracted for	4 542	2 057	4 546	3 319
In addition the directors have authorised the purchase of buildings and plant for which contracts have not been entered into	1 188	4 160	1 463	4 798
The above capital expenditure will be financed from cash flow and additional loan facilities				
	5 730	6 217	6 009	8 117
8. INVESTMENTS AT COST				
Listed				
National Bolts Limited 631 125 shares of 50 cents each (Market value: R694 000 (1974–R631 000))	506	506	506	506
Unlisted				
Joint venture in Transvaal Copper Rod Company	1 014	940	1 014	940
National Materials Service Corporation (Pty) Limited	750	750	750	750
Hall & Pickles (Coastal) (Pty) Limited	40	40	40	40
Veldmaster (Rhodesia) (Pvt) Limited	46	46	46	46
Alustang (Pty) Limited	425	425	425	425
(Directors' valuation of unlisted investments R3 175 000 (1974–R2 201 000))				
	2 275	2 201	2 275	2 201
	2 781	2 707	2 781	2 707
9. SUBSIDIARY COMPANIES				
Shares at cost	4 412	3 891	599	–
Amounts owing to subsidiaries	9 375	7 152	–	–
	13 787	11 043	599	–
Less provision for losses	1 068	603	–	–
	12 719	10 440	599	–
Less amounts owing to subsidiaries	715	–	110	–
	12 004	10 440	489	–

The results of Veldmaster Incorporated for the six months since acquisition to 31st December, 1975 have not been consolidated as audited financial statements are not available and they are not considered material in relation to the financial position or the results of Usco.

10. LONG-TERM DEBTORS				
Secured by mortgage bonds			303	426
Secured by hire purchase agreements			1 737	1 382
			2 040	1 808

These comprise amounts owing by employees in respect of housing properties sold under the Corporation's housing schemes and are repayable in monthly instalments over periods of up to twenty-five years.

Notes to the Annual Financial Statements

	USCO		GROUP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
11. STOCK				
Raw materials	7 666	7 279	11 108	9 355
Consumable stores	4 640	3 045	5 042	3 303
Work in progress	9 926	7 762	12 518	8 839
Finished goods	3 701	2 102	4 798	2 796
	25 933	20 188	33 466	24 293
12. DEFERRED EXPENDITURE				
Commissioning costs on new steel melting complex written off over five years from 1973	371	557	371	557
Exchange variances and management fees on long-term overseas loans written off over the period of the loans	107	206	107	206
Major repairs written off over periods from one to five years	394	192	428	235
	872	955	906	998
13. CONTINGENT LIABILITIES				
Guarantees to building societies for employees housing loans	1 415	1 108	1 415	1 108
Bills discounted	1 219	–	1 219	–
Guarantee of loans granted to associate companies	1 275	450	1 275	450
14. OPERATING PROFIT				
The operating profit is arrived at after taking into account the items detailed below:				
Profit/(Loss) on sale of fixed assets	3	(15)	4	(18)
Auditors' remuneration – Audit fees	30	20	39	29
Leasing of equipment	298	233	299	234
Secretarial fees	35	33	35	33
15. DIRECTORS' EMOLUMENTS				
For services as directors	26	26		
For other services	35	35		
	61	61		
16. INCOME FROM INVESTMENTS				
Listed	88	75	88	75
Unlisted	423	479	423	479
Less: Proposed dividend provided for in prior year, not declared	120	–	120	–
	303	479	303	479
	391	554	391	554

Notes to the Annual Financial Statements

	USCO		GROUP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
17. INCOME FROM SUBSIDIARY COMPANIES				
Dividends	800	500		
Interest	401	285		
Rents	50	–		
Management fees	–	118		
	1 251	903		
18. INTEREST PAID ON BORROWINGS				
Long-term borrowings	1 871	1 940	1 986	2 056
Other	1 113	1 457	1 173	1 466
	2 984	3 397	3 159	3 522
19. TAXATION				
South African normal taxation – Current year	2 285	65	3 457	100
Adjustment – prior year	(65)	–	(100)	–
Deferred taxation – Current year	231	1 240	245	1 413
Adjustment – prior years	–	(375)	–	(375)
	2 451	930	3 602	1 138
20. DIVIDENDS				
Preferent "A" and "B" shares				
Paid 8 cents per share (4%) (1974 – 8 cents)	20	20	20	20
Proposed 14 cents per share (7%) (1974 – 10 cents)	35	25	35	25
	55	45	55	45
Ordinary shares				
Proposed 5,5 cents per share (11%) (1974 – 4,5 cents)	1 596	1 305	1 596	1 305
	1 651	1 350	1 651	1 350

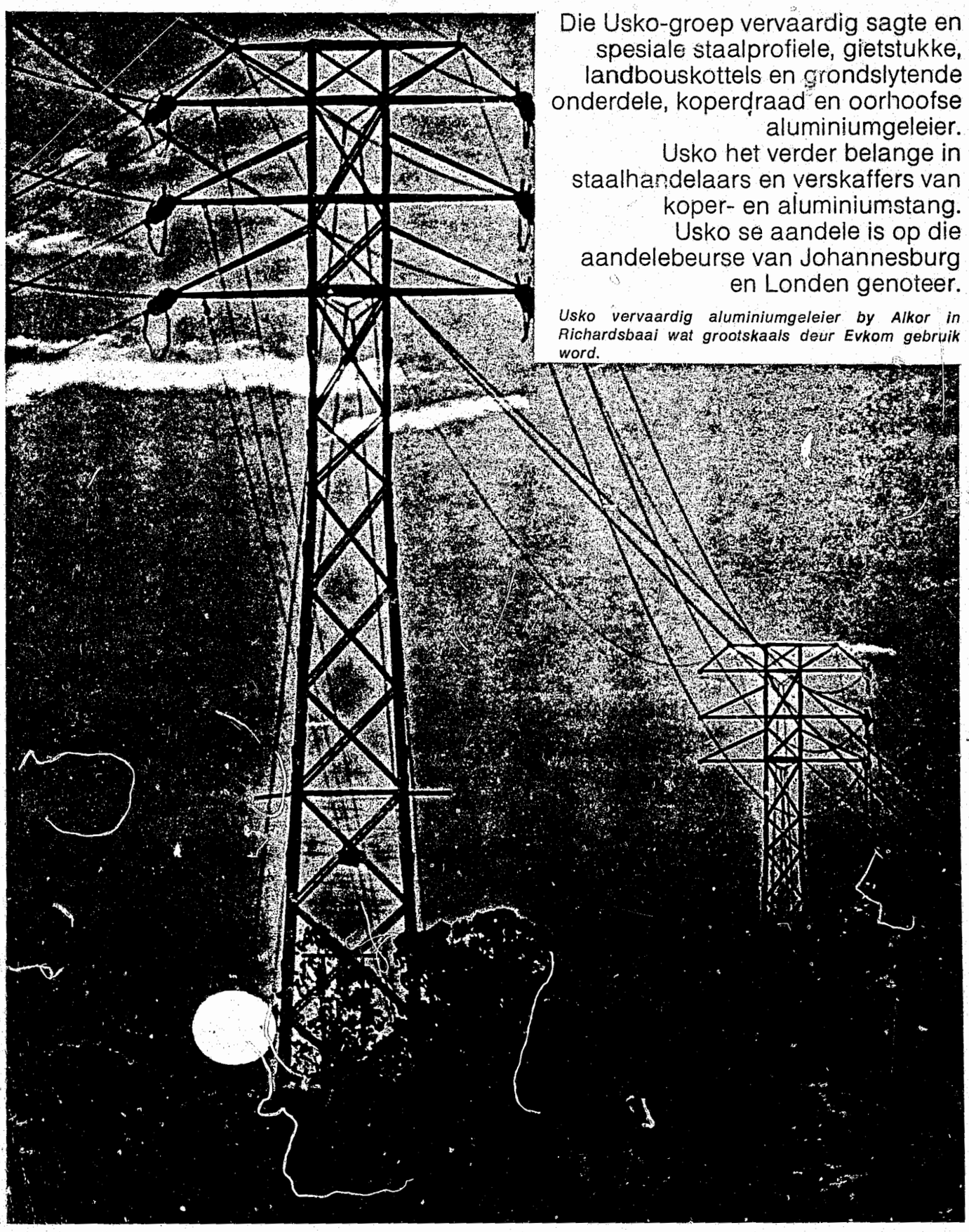
Group Five Year Review

	1975	1974	1973	1972	1971
OPERATING RESULTS (R000's)					
Steel sales	73 275	55 996	44 532	32 615	31 067
Copper and aluminium sales	62 167	78 014	59 671	44 284	39 367
Total sales	135 442	134 010	104 203	76 899	70 434
Profit before tax	9 900	6 364	1 425	751	2 735
Tax and deferred tax	3 602	1 138	557	(425)	1 076
Profit after tax	6 298	5 226	868	1 176	1 659
Dividends	1 651	1 350	40	40	983
Retained income for the period	4 664	3 893	862	1 136	676
FINANCIAL DETAILS (R000's)					
Current assets	49 076	39 250	29 522	29 840	25 433
Current liabilities	29 852	22 114	16 724	10 725	11 987
Working capital	19 224	17 136	12 798	19 115	13 446
Other assets	6 216	5 513	5 688	5 337	3 352
Net fixed assets	31 754	31 078	29 963	24 018	15 951
Other liabilities	21 718	22 915	21 530	22 413	7 828
Shareholders' funds	35 476	30 812	26 919	26 057	24 921
SOURCE OF FUNDS					
Shareholders' funds	40,8	40,6	41,3	44,1	55,7
Other liabilities	25,0	30,2	33,0	37,9	17,5
Current liabilities	34,2	29,2	25,7	18,0	26,8
	100,0%	100,0%	100,0%	100,0%	100,0%
APPLICATION OF FUNDS					
Debtors	15,5	17,7	20,2	17,5	19,2
Stock	38,4	32,0	24,6	24,1	36,4
Net fixed assets	36,5	41,0	46,0	40,6	35,7
Other assets	9,6	9,3	9,2	17,8	8,7
	100,0%	100,0%	100,0%	100,0%	100,0%
KEY DATA					
Salaries and wages (R000's)	22 773	18 470	15 519	12 651	11 898
Number of employees	6 014	6 030	5 931	5 697	5 315
Number of ordinary shares (000's)	29 010	29 010	29 010	29 010	29 010
Funds from operations (R000's)	13 713	9 294	3 923	2 700	2 991
Earnings per ordinary share	21,52c	17,86c	2,85c	3,92c	5,58c
Dividends per ordinary share	5,50c	4,50c	–	–	3,25c
Retained income per ordinary share	16,02c	13,36c	2,85c	3,92c	2,33c
Net worth per ordinary share	120,57c	104,49c	91,06c	88,10c	84,18c
Dividend cover	3,9	4,0	–	–	1,7
Current ratio	1,6:1	1,8:1	1,8:1	2,8:1	2,1:1
Taxed profit to shareholders' funds	18,0%	17,0%	3,2%	4,5%	6,6%
Sales (growth)	1,1%	28,6%	35,5%	9,2%	(5,9%)
Shareholders' funds (growth)	15,1%	14,5%	3,3%	4,6%	2,8%

DIE UNIE-STAAL-KORPORASIE (VAN SUID-AFRIKA) BEPERK

JAARVERSLAG 1975

USKO



Die Usko-groep vervaardig sagte en spesiale staalprofiele, gietstukke, landbouskottels en grondslytende onderdele, koperdraad en oorhoofse aluminiumgeleier.
Usko het verder belange in staalhandelaars en verskaffers van koper- en aluminiumstang.
Usko se aandele is op die aandelebeurse van Johannesburg en Londen genoteer.

Usko vervaardig aluminiumgeleier by Alkor in Richardsbaai wat grootskaals deur Evkom gebruik word.

Die Unie Staalkorporasie

(van Suid-Afrika) Beperk
(ingelyf in die Republiek
van Suid-Afrika)

Vier-en-sestigste
Jaarverslag 1975

USCO

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Direksie en Bestuur

Direkteure
Dr. M. D. Marais (Voorsitter)
Prof. H. J. Samuels (Adjunk-Voorsitter)
J. P. Coetzee
E. P. Gush
W. J. Hefer
Prof. P. W. Hoek
H. C. H. Hutten (Uitvoerende Direkteur)
S. B. Kossuth

Alternatiewe Direkteure
H. J. Barnard
M. W. King
M. C. O'Dowd
D. J. Ritson

Uitvoerende Beamptes
J. C. de Waal (Hoofbestuurder)
Dr. F. W. Güldenpfennig (Afdelingsbestuurder: Staalvervaardiging)
D. C. Oosterdaal (Afdelingsbestuurder: Finansies en Administrasie)
J. C. Steenkamp (Afdelingsbestuurder: Personeeldienste)
J. U. van Wyk (Afdelingsbestuurder: Usko-filiale)
J. H. Vorster (Tegniese Bestuurder)

Sekretaris
R. J. van Jaarsveld,
Posbus 48,
Generaal Hertzogweg,
Vereeniging 1930.

Londen-Sekretarisse
Anglo-American Corporation
of South Africa Limited,
40 Holborn Viaduct,
London, E.C.1.

Oordragsekretarisse
Consolidated Share Registrars
Limited,
Marshallstraat 62, Johannesburg 2001.

Bankiers
Barclays-Nasionale Bank Beperk
Volkskas Beperk

Ouditeure
Deloitte & Kie., Johannesburg

Geregistreerde Kantoor
Posbus 48, Generaal Hertzogweg, Vereeniging 1930.

Kennisgewing aan Gewone Aandeelhouers

Kennis geskied hierby dat 'n vergadering van gewone aandeelhouers van die Korporasie gehou sal word in die raadsaal van die Korporasie, Generaal Hertzogweg, Vereeniging op 22 Junie 1976 om 12h00 om die volgende sake af te handel:

Om twee direkteure te kies in die plek van menere H. C. H. Hutten en E. P. Gush, wat ingevolge Artikel 100 (a) van die Korporasie se statute uittree, maar herkiesbaar is en hulle weer verkiesbaar stel.

'n Aandeelhouer wat gemagtig is om die bogenoemde vergadering by te woon, is geregtig om 'n gevolmagtigde in sy plek aan te stel wat namens hom kan stem en praat.

Sodanige gevolmagtigde hoef nie noodwendig 'n aandeelhouer van die Korporasie te wees nie. Aandeelhouers wat verlang dat gevolmagtigdes hulle op die vergadering verteenwoordig, moet die Korporasie se geregistreerde kantoor of sy Londense kantoor nie later nie as 48 uur voor die datum van die vergadering, daarvan in kennis stel. Die oordragregisters van die Korporasie, beide in Johannesburg en Londen, sal vanaf 14 Junie 1976 tot 22 Junie 1976, met inbegrip van albei datums, gesluit wees.

Namens die Direksie,
R. J. van Jaarsveld,
Sekretaris

24 Februarie 1976.

Kennisgewing aan Aandeelhouers

Kennis geskied hierby dat die vier-en-sestigste gewone algemene vergadering van aandeelhouers van die Korporasie gehou sal word in die raadsaal van die Korporasie, Generaal Hertzogweg, Vereeniging, op 22 Junie 1976 om 12h00 om die volgende sake af te handel.

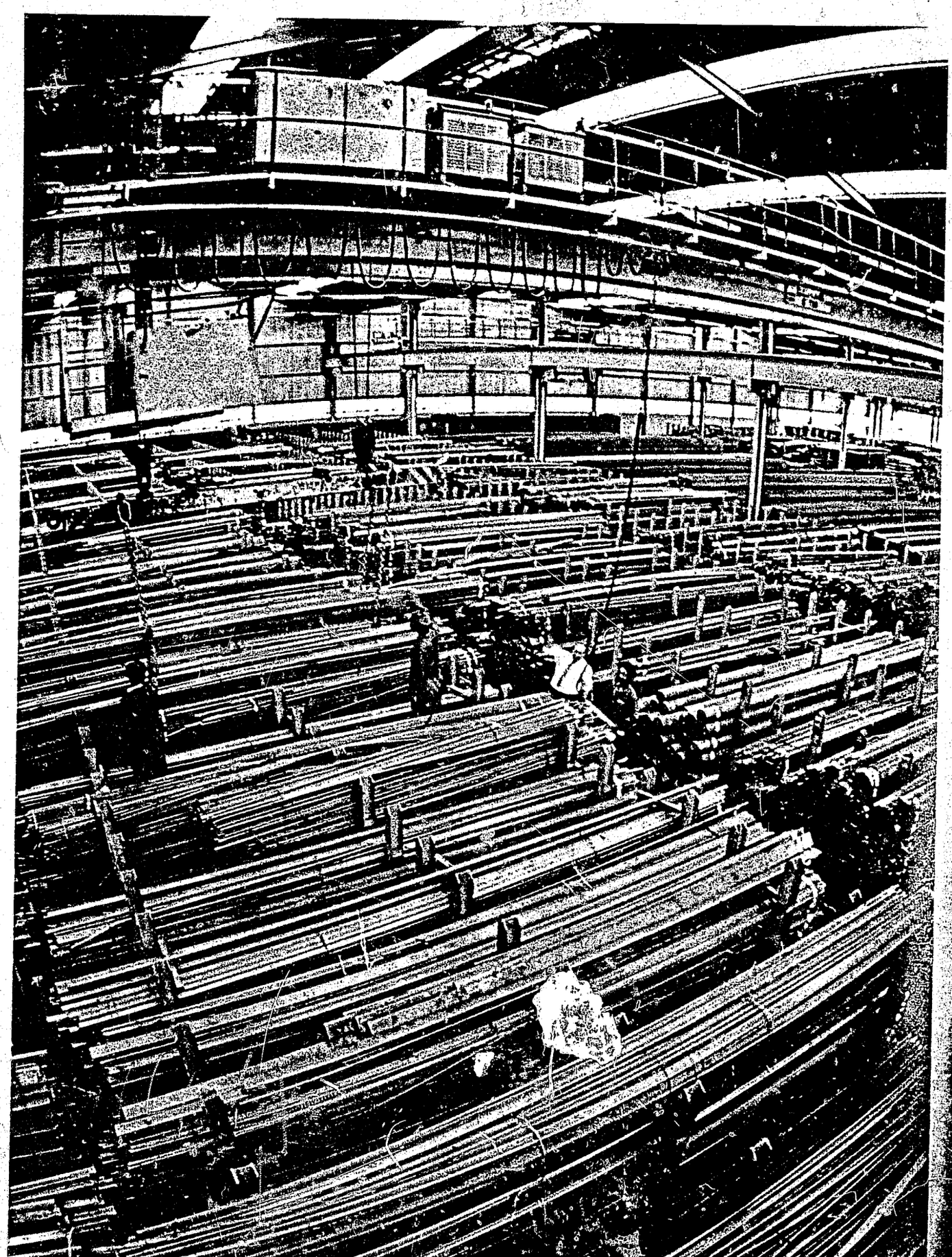
1. Om die finansiële jaarstate vir die jaar geëindig 31 Desember 1975, te ontvang en te oorweeg.
2. Om enige ander sake wat op 'n gewone algemene vergadering van aandeelhouers van die Korporasie behandel kan word, af te handel.

'n Aandeelhouer wat gemagtig is om die bogenoemde vergadering by te woon, is geregtig om 'n gevolmagtigde in sy plek aan te stel wat namens hom kan stem en praat.

Sodanige gevolmagtigde hoef nie noodwendig 'n aandeelhouer van die Korporasie te wees nie. Aandeelhouers wat verlang dat gevolmagtigdes hulle op die vergadering verteenwoordig, moet die Korporasie se geregistreerde kantoor of sy Londense kantoor nie later nie as 48 uur voor die datum van die vergadering, daarvan in kennis stel. Die oordragregisters van die Korporasie, beide in Johannesburg en Londen, sal vanaf 14 Junie 1976 tot 22 Junie 1976, met inbegrip van albei datums, gesluit wees.

Namens die Direksie,
R. J. van Jaarsveld,
Sekretaris

24 Februarie 1976.



Regs: 'n Voorraad gietstukke wat by Vaalwerke in Vereeniging gemaak word.

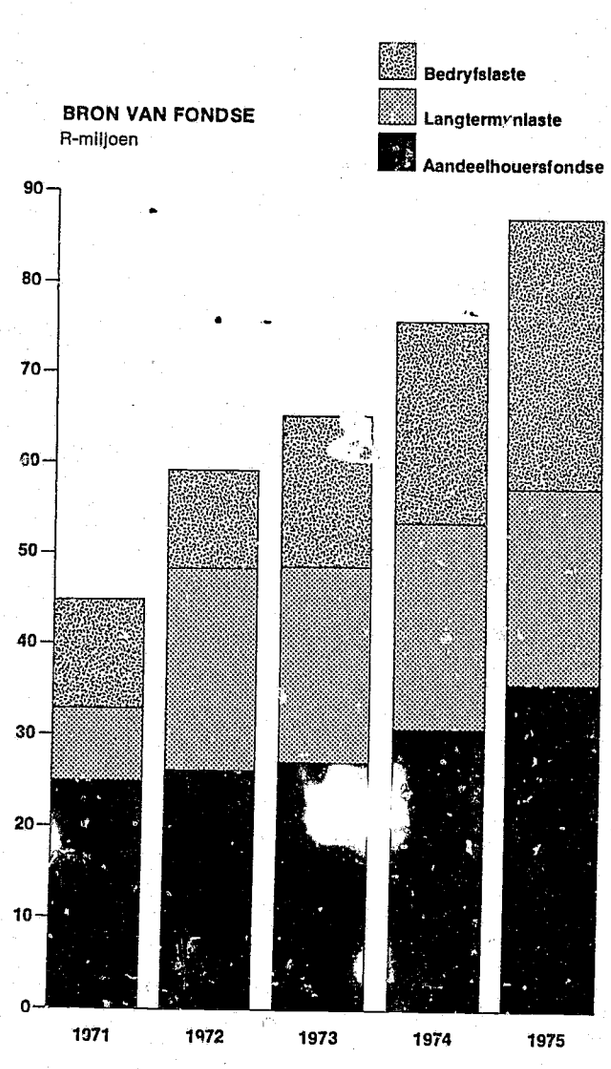
Links: Pakhuis by Namaskor, Alberton, waar staal voor bemarking verwerk en opgeberg word.

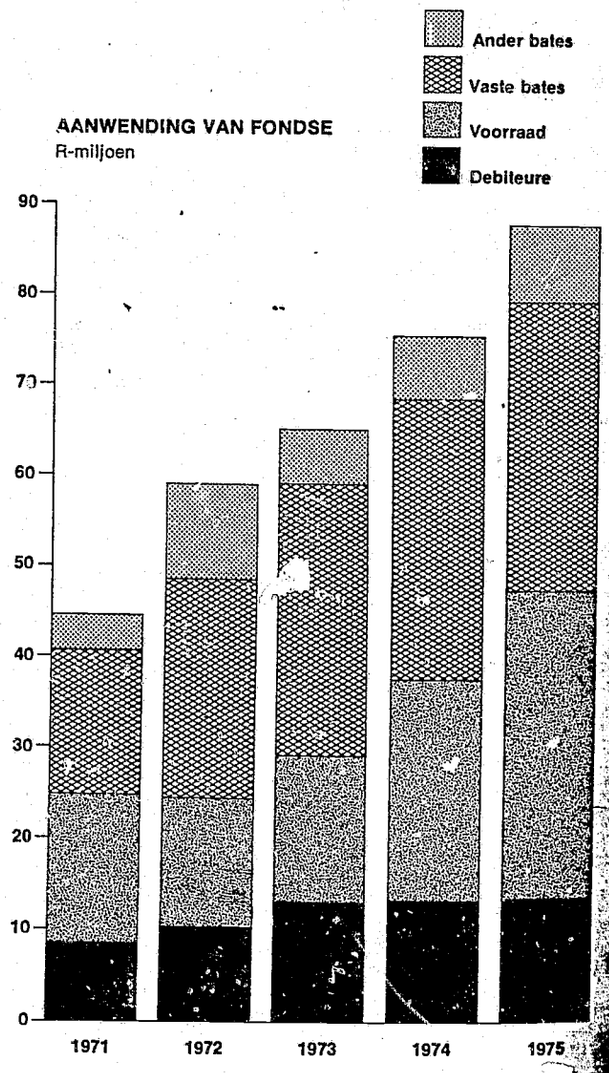
Koperkabel wat deur Usko vir die elektriese bedryf vervaardig word.

Landbouskottels word by die Veldmaster-aanleg in Vereeniging afgeblus. Hierdie is hoofsaaklik vir die uitvoermark.

Finansiële Hoogtepunte van Groep

	1975	1974
BEDRYFSOPSOMMING		
Totale verkope	135 442 000	134 010 000
Wins voor belasting	9 900 000	6 248 000
Wins na belasting	6 298 000	5 226 000
FINANSIËLE OPSOMMING		
Bedryfskapitaal	19 224 000	17 136 000
Netto vaste bates	31 754 000	31 078 000
Ander bates	6 216 000	5 513 000
Langtermynlenings	19 816 000	21 258 000
Aandeelhouersbelang	35 476 000	30 812 000
KERNDATA		
Netto waarde per gewone aandeel	120,57c	104,49c
Verdienste per gewone aandeel	21,52c	17,56c
Bedryfsverhouding	1,6:1	1,8:1





Voorsittersrede

RESULTATE

Die Korporasie se groepwins het die verwagting vir die jaar sowel as die wins van verlede jaar oorskry. Die aansienlike beter winsposisie is hoofsaaklik aan die volgende faktore toe te skryf:

1. Verhoogde bydrae van staalprodukte tot groepwinste. Versendings van staalprodukte is gehandhaaf met 'n merkbare verbetering in die mengsel van verkope met die klem op die oorskakeling na spesiale staalsoorte. Prysverhogings van beheerde produkte in Januarie en Junie het meegehelp om kostestygings te bekamp.
2. Gietstukke se bydrae tot groepwinste is aansienlik hoër as gevolg van hoër doeltreffendheid en groter versendings.
3. Aluminium se winste vir die jaar het 'n bevredigende styging getoon en versendings het dié van die vorige jaar oorskry.
4. Die tonnemaat koperprodukte verkoop het dié van die vorige jaar oorskry, maar wêreldpryse het aansienlike dalings getoon. Die laer markpryse het die randwaarde van die koperomset met R22-miljoen laat daal, maar winsgewendheid is gehandhaaf.
5. Ander produkte en filiaalmaatskappye het volgens verwagting gepresteer, maar Veldmaster het 'n verlies getoon as gevolg van die vertraging in die inbedryfstelling van die nuwe aanleg.

   Hoewel daar gedurende Februarie 1975 ongekende oorstromings voorgekom het en sommige produksie-eenhede by Vaalwerke vir 'n lang tydperk buite produksie was, is hierdie verliese, sowel as skade aan die ontspanningsklub, uit versekering verhaal.

VOORUITSIGTE

Ek voorsien nie 'n opswaai in die Suid-Afrikaanse ekonomie vir ten minste twee jaar nie. Ons belangrikste handelsvennote soos die V.S.A., Brittanje, Frankryk, Duitsland en Japan, toon nog hoë werkloosheidsyfers. Voordat hierdie lande, veral die V.S.A., se ekonomieë nie herstel nie, sal Suid-Afrika nie 'n oplewing toon nie.

Ingevoerde inflasie, veral na die onlangse devaluasie van die Rand, sal ons grootste kosteprobleem bly. Die Korporasie is afhanklik van ingevoerde toerusting vir sy uitbreidings- en moderniseringsprogramme en verhoogde kapitaalkoste is dus onvermydelik.

Die winste vir die huidige jaar word op 'n laer vlak begroot. Sekere produkte in Usko se staalreeks soos stang en holboorstaal, het gedurende die tweede helfte van 1975 dalings getoon en hierdie dalings sal gedurende 1976 voortduur. Verder word 'n wanbalans in die vraag na staal ondervind wat meebring dat sekere aanlegte oorbelaai is terwyl ander onder kapasiteit sal loop. In die lig van die Regering se anti-inflasieveldtog bestaan daar twyfel of daar gedurende die jaar 'n algemene staalprysverhoging toegestaan sal word. Dit sal noodwendig die winsgewendheid van staal nadelig beïnvloed aangesien onbeheerbare kostestygings nog steeds ondervind word.

Die vooruitsigte vir aluminium, koper en Veldmaster se produkte is bemoedigend en bestellings is voldoende om die aanlegte ten volle beset te hou gedurende die jaar.

Die Korporasie gaan voort met sy beplande uitbreidingsprogramme, hoewel dit tot noodsaaklike projekte beperk word. Die direksie het toegestem dat die gietery se kapasiteit uitgebrei word ten einde produksie te verhoog. Goeie vordering word gemaak met die elektroslakraffineringsaanleg en smeepers wat gedurende 1976 in bedryf sal kom. Dit sal die Korporasie in staat stel om die vraag na smeestukke en spesiale gereedskapstaal grotendeels te bevredig en Suid-Afrika minder afhanklik van die buiteland te maak.

Die kapitaaluitbreidingsprogram sal gedeeltelik gefinansier word uit kontantvloei en verder uit mediumtermynlenings.

'n Besondere hoofstuk in die geskiedenis van die Korporasie was die sluiting van die ou opeherdoonds te Vaalwerke wat 60 jaar lank in bedryf was. Dit is moontlik gemaak deur die beplande oorskakeling na die produksie van vloeistaal op die nuwe elektriese oonde. Hierdeur het die Korporasie 'n groot bron van lugbesoedeling in Vereeniging uitgeskakel. Terselfdertyd is twee ou walse gesluit en produksie na die nuwe walswerke oorgeskakel.

Die Vaalwerke-perseel is ten volle ontwikkel en om toekomstige uitbreidings te akkommodeer, is 'n aangrensende perseel van 18 hektaar teen 'n billike prys bekom.

BESTUUR EN PERSONEEL

Die belangrikste faktor in die bekamping van inflasie is hoër produktiwiteit ten opsigte van bestuur en personeel. Hierdie feit is sterk onder die aandag van alle personeel gebring en verhogings word volgens meriete toegeken. Opleiding van alle werkers geniet deurgaans aandag en daar word veral gekonsentreer op die laer vlakke. Operateurs word sover moontlik as volwasse vakleerlinge ingetrek om hulle vir vakmanswerk te bekwaam. 'n Tekort aan vakmanne is steeds gedurende 1975 ondervind en 'n suksesvolle werwingsveldtog is oorsee onderneem om die tekort aan te vul.

Die Korporasie se pensioenfonds is gedurende 1975 verbeter om veral voorsiening te maak vir die uitwerking van inflasie op pensioenvoordele. Dit het verhoogde bydraes vir die Korporasie sowel as werknemers meegebring.

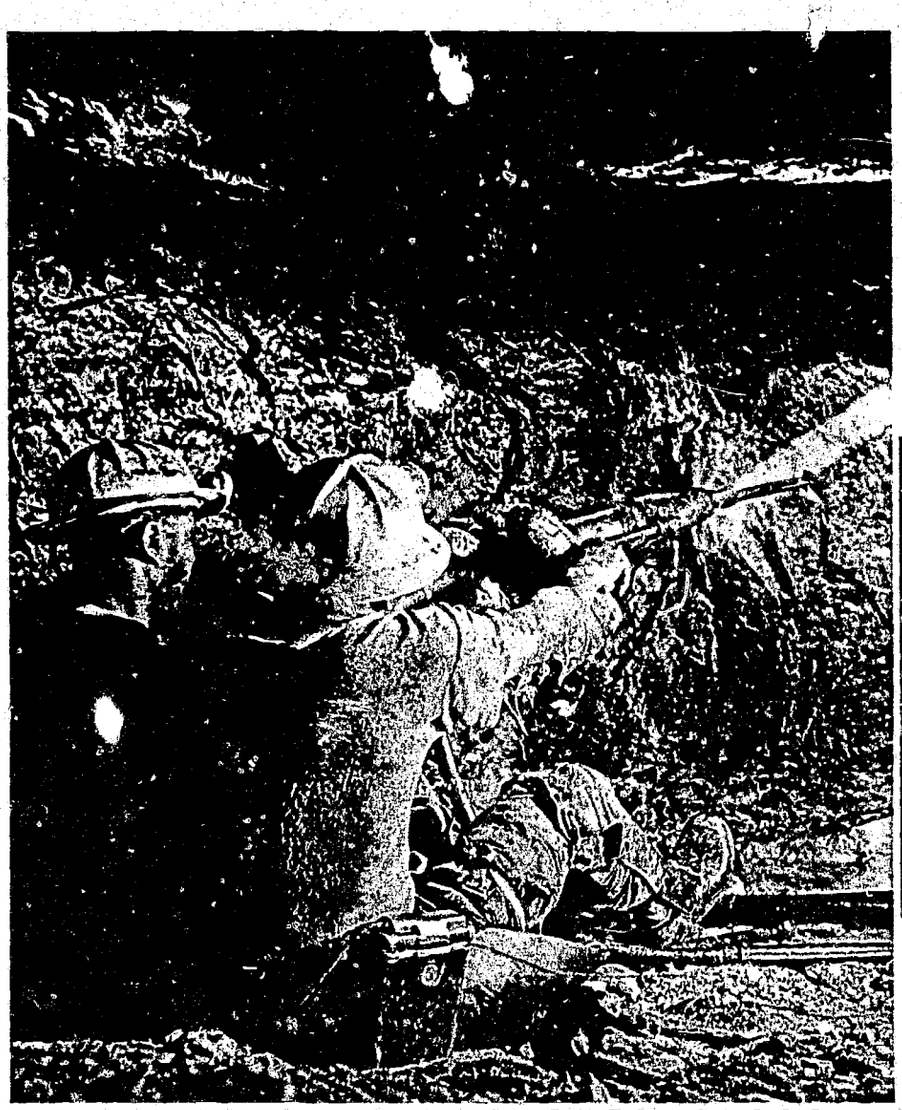
Die Korporasie handhaaf steeds 'n goeie verhouding met sy werknemers. Die skakelkomitees het 'n uitstekende funksie verrig as 'n kommunikasiemiddel tussen bestuur en swart werkers. 'n Geordende organisasiestruktuur is ingestel vir die swart arbeidsmag wat 'n definitiewe riglyn vir bevordering daarstel. Hierbenewens is 'n studieleningskema vir swart werkers ingestel om hul kinders in staat te stel om hoër kwalifikasies te bekom.

BEDANKING

Ek bedank my mede-direkteure vir hul buitengewone lojaliteit en uitstekende samewerking. Namens die direksie my besondere waardering aan die uitvoerende direkteur, mnr. Hubert Hutten, die hoofbestuurder, mnr. J. de Waal, die bestuur en personeel vir hul werkywer, pligsgetrouheid en deursettingsvermoë. Die afgelope suksesvolle jaar het weer eens getoon dat daar 'n noue korrelasie tussen goeie bestuur en lojale werkprestasies enersyds en goeie resultate andersyds bestaan.

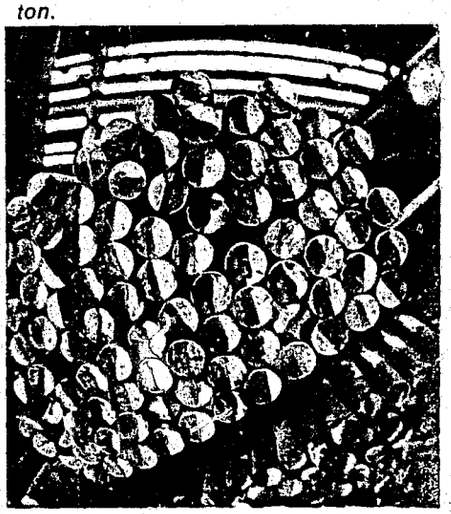
M. D. Marais
Voorsitter

24 Februarie 1976.



Holboorstaal van Usko word in die vervaardiging van boorpunte vir die mynbedryf gebruik.

Usko-staalstang by Namaskor, Alberton.



Die smedery by Vereeniging waar staal van hoë gehalte gesmee word.

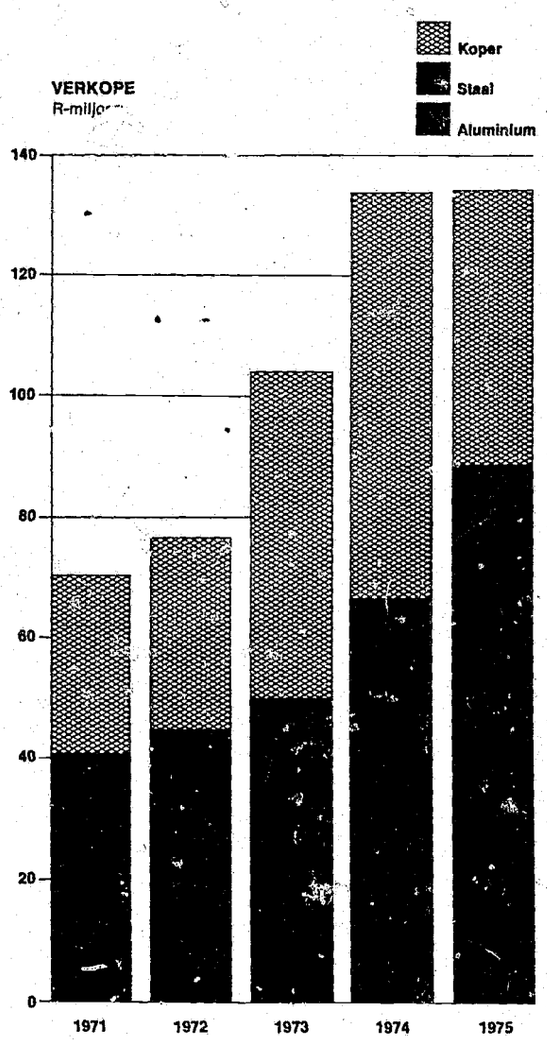
Finansiële Jaarstate van Groep

vir die jaar geëindig 31 Desember 1975

Die groep se finansiële jaarstate wat op bladsye 10 tot 21 uiteengesit is, is deur die Raad van Direkteure goedgekeur en is op 24 Februarie 1976 namens die Raad onderteken deur

M. D. Marais,
Voorsitter

J. P. Coetzee,
Direkteur



Ouditeursverslag

Aan die Lede van die Unie Staalkorporasie (van Suid-Afrika) Beperk

Ons het die finansiële jaarstate, soos op bladsye 10 tot 21 uiteengesit, nagegaan en na ons mening, gegrond op ons ondersoek en die verslae van die ouditeure van sekere filiale wat nie deur ons geouditeer word nie, verstrek hierdie state 'n redelike weergawe van die finansiële stand van die korporasie en sy filiale en van die resultate van hul bedrywighede op die wyse wat die Maatskappywet, 1973, vereis.

Ons stem met die besluit van die direkteure saam om nie 'n filiaalmaatskappy te konsolideer nie. Die rede hiervoor word in aantekening 9 uiteengesit.

Deloitte & Kie.,

Geoktrooieerde Rekenmeesters (S.A.)
Johannesburg.
24 Februarie 1976.

Direkteursverslag

U direkteure lê hiermee die jaarverslag en die geouditeerde finansiële jaarstate vir die jaar geëindig 31 Desember 1975 voor.

GROEPRESULTATE

Die wins toedeelbaar aan aandeelhouers van Usko het na belasting R6 298 000 bedra, wat R1 072 000 hoër is as die vorige jaar. Omset het gestyg van R134 010 000 tot R135 442 000, terwyl die verdienste per gewone aandeel van 17,86 sent tot 21,52 sent verhoog het.

Die randwaarde van omset toon 'n geringe styging. Hoewel koperomset in volume toegeneem het, het die waarde daarvan met R22-miljoen gedaal as gevolg van die aansienlike dalings in die wêreldmarkpryse. Die verhoogde verkope van ander produkte, nl. aluminium, staal en gietstukke, het hierdie daling oorskry.

Bedryfswins het verhoog van R11 899 000 tot R16 476 000 waartoe die belangrikste bydraers spesiale staal, aluminiumprodukte en gietstukke was. Rente betaal het afgeneem met R363 000 as gevolg van laer rentekoerse op plaaslike en oorsese korttermynlenings.

Die verhouding van wins voor belasting toeskryfbaar aan die verskeie soorte besigheid was:

	1975	1974
Ysterhoudende produkte	**6 213 000**	4 673 000
Nie-ysterhoudende produkte	**3 687 000**	1 575 000
	R9 900 000	R6 248 000

GROEPBEDRYWIGHEDE

Staal

Usko vervaardig sagtestaalprofiele, spesiale staalsoorte en gietstukke. Versendings van alle staalprodukte vir die jaar het gestyg met 5 000 ton tot 296 000 ton. Die nuwe walsery wat gedurende die tweede helfte van verlede jaar by Vaalwerke in bedryf gestel is, kon weens tegniese probleme nie die verwagte produksie lewer nie. Die staalprysverhogings wat gedurende Januarie en Junie deur die regering toegestaan is, het meegehelp om die onbeheerbare kostestygings, veral t.o.v. arbeid, allooie, vuurvaste materiaal en grondstowwe, te absorbeer.

Koper

Hierdie afdeling verkry sy koperstang van Transvaal Copper Rod Company. Die stang word getrek tot draad en strook, terwyl sommige draad verder tot gevlegde geleier verwerk word. Koper het sy bydrae tot groepwinste as gevolg van hoër versendings op eie produksie verhoog.

Usko Aluminiumkorporasie (Edms) Beperk

Die aanleg is in Richardsbaai gevestig en die maatskappy vervaardig onbedekte oorhoofse aluminiumgeleier vir die transmissie van elektrisiteit. Die maatskappy het 'n geslaagde jaar beleef, waarin die bydrae van verlede jaar oortref is, hoofsaaklik as gevolg van 'n beter benutting van die aanlegkapasiteit. Die vraag na geleier het op 'n hoë vlak gebly.

Veldmaster (Edms) Beperk

Vervaardig landbouskottels en grondslytende onderdele. Die grootste gedeelte van die produksie word uitgevoer. Die maatskappy het 'n verlies gely vir die jaar as gevolg van die feit dat die nuwe aanleg se inbedryfstelling vertraag is, wat aan die laat aflewering van toerusting uit die buiteland toegeskryf kan word. Die nuwe aanleg sal Veldmaster in staat stel om sy verkope op die oorsese markte te verhoog. Hierdie voordeel sal gedurende 1976 gerealiseer word en dit sal die maatskappy op 'n winsgewende grondslag plaas.

Usko Kabelmaatskappy (Edms) Beperk

Hierdie maatskappy vervaardig gepantserde kabel volgens S.A.B.S.-standaarde vir die elektriese bedryf. Die maatskappy is gedurende die jaar winsgewend bestuur.

Transvaal Copper Rod Company

Die funksie van hierdie gesamentlike onderneming van Usko en Palabora-Mynmaatskappy is om gesmelte koper, verskaf deur Palabora-Mynmaatskappy, tot stang te verwerk wat uitsluitlik deur Usko verkoop word. Hierdie onderneming het sy winsgewendheid gedurende die jaar op 'n bevredigende peil gehandhaaf.

National Materials Service Corporation (Edms) Beperk

Hierdie gesamentlike maatskappy van Usko en Klöckner Nederland B.V., dryf handel as 'n staalhandelaar en dienssentrum. Die vraag na hierdie maatskappy se produkte was hoog gedurende die jaar en die onderneming het sy suksesvolste jaar sedert sy stigting beleef. Die winste het dié van die vorige jaar aansienlik oorskry.

Hall & Pickles (Coastal) (Edms) Beperk

Hierdie maatskappy dryf handel in spesiale staal in Durban en Port Elizabeth. Die omset van die sentrums het verhoog en winsgewendheid het na wense toegeneem.

Veldmaster (Rhodesia) (Pvt) Limited

Hierdie maatskappy wat landbouskottels in Rhodesië vervaardig, het sy winsgewendheid gehandhaaf.

Veldmaster Incorporated (U.S.A.)

Kontinuïteit van doeltreffende verteenwoordiging van Veldmaster (S.A.) se produkte op die Amerikaanse mark is vir Veldmaster van wesenlike belang.

Om dit te verseker, is die organisasie van die agent wat Veldmaster die afgelope vyf jaar in die V.S.A. verteenwoordig het, vanaf 1 Julie 1975 oorgeneem en die naam na Veldmaster Incorporated verander.

Die resultate sedert oorname is bevredigend.

Alustang (Edms) Beperk

Vervaardig aluminiumstang vir produksie van oorhoofse geleier te Richardsbaai. Die maatskappy word gesamentlik deur Usko, Aberdare Cables Beperk en Alusaf (Edms) Beperk besit.

Die maatskappy het 'n dividend gedurende die jaar verklaar. Die vraag na stang het op 'n hoë vlak gebly en winsgewendheid was bevredigend.

Usko Huiseienaars (Edms) Beperk

Hierdie maatskappy voorsien in die behuisingsbehoeftes van die werknemers van die Korporasie in Vereeniging. Behuisingsvoordele word aangebied in die vorm van waarborge by bougenootskappe wat werknemers in staat stel om eie huise teen gesubsidieerde rentekoerse te bekom.

Direkteursverslag

Verder word huureenhede verskaf. Om in dringende behoeftes te voorsien, is 'n blok woonstelle gedurende die jaar aangekoop. Die bouprogram van huise in Sonlandpark is voltooi en die huise is aan werknemers beskikbaar gestel.

Usko Behuising (Richardsbaai) (Edms) Beperk
Hierdie maatskappy voorsien woonhuise aan werknemers van Usko Aluminiumkorporasie in Richardsbaai.

GEKONSOLIDEERDE BALANSSTAAT
Die totale kapitaal aangewend aan die einde van die finansiële jaar, beloop R57 194 000 (1974–R53 727 000) waarvan ongeveer 75 persent in die staalafdeling en 25 persent in die nie-ysterhoudende afdeling aangewend is. Die totale kapitaaluitgawe vir die jaar het R4 982 000 (1974–R3 825 000) beloop en is hoofsaaklik aangewend vir die nuwe Velomaster-aanleg en die aanvang van die elektroslak-raffineringsaanleg en smeepers. Verder het verpligtinge vir kapitaaluitgawes aan die einde van die jaar R4 546 000 (1974–R3 319 000) bedra, terwyl u direkteure verdere uitgawes ten bedrae van R1 463 000 (1974–R4 798 000) goedgekeur het. Hierdie bedrae sal hoofsaaklik bestee word om die elektroslak-raffineringsaanleg en smeepers te voltooi, asook om die gietery se kapasiteit vir vervaardiging van mangaangietstukke uit te brei. Voorrade teen R33 466 000 toon 'n styging van R9 173 000 in vergelyking met 1974. Verhoging in voorraadwaardes van grondstowwe is onder andere te wyte aan tydelike noodsaaklike voorraadopbouing sowel as aansienlike prysstygings oor die afgelope jaar.

AANDELEKAPITAAL
Die gemagtigde en uitgereikte aandelekapitaal van die Korporasie bly onveranderd op 'n bedrag van R15 005 000, verdeel in 29 010 000 gewone aandele van 50 sent elk, 125 000 „A"-voorkeuraandele van R2 elk en 125 000 „B"-voorkeuraandele van R2 elk, almal volopbetaald.

FINANSIES
Die fondsbehoeftes van die Groep bly hoog, veral wat bedryfskapitaal betref. Weens 'n bevredigende kontantvloei gedurende die jaar, tesame met voldoende leningsfasiliteite, was dit moontlik om in alle behoeftes te voorsien. Die verhoogde uitvoere van landbouskottels en onderdele na die V.S.A. het addisionele bedryfskapitaal geverg. 'n Uitvoer-verdiskonteringsfasiliteit is hiervoor gereël.

DIVIDENDE
Dividende gedurende die jaar verklaar, het 22 sent per R2-aandeel op die kumulatiewe winsdelende „A"- en „B"-voorkeuraandele bedra.

'n Gewone dividend van 5,5 sent per aandeel is op 24 Februarie 1976 verklaar, betaalbaar aan gewone aandeelhouers wat op 12 Maart 1976 geregistreer is en dividendbewyse sal op of teen 15 April 1976 gepos word.

DIREKSIE
Daar was geen verandering in die samestelling van die Raad van Direkteure gedurende die jaar nie.

SEKRETARIS
Mnr. R. J. van Jaarsveld beklee die pos van Sekretaris van die Korporasie. Sy besigheidsadres is Generaal Hertzogweg, Vereeniging, en sy posadres is Posbus 48, Vereeniging 1930.

	1975 R'000	1974 R'000
GROEPWINS EN AANWENDINGS		
Wins vir die jaar na belasting	**6 298**	5 110
Plus Buite-aandeelhouersgedeelte van verlies in 'n filiaalmaatskappy	**–**	116
Wins toedeelbaar aan aandeelhouers van Usko	**6 298**	5 226
Plus Inkomste behou aan begin van die jaar	**904**	1 028
Beskikbaar vir aanwending	**7 202**	6 254
U Direkteure het die totaal as volg toegewys:		
Dividende	**1 651**	1 350
Oordrag na reserwe vir vervanging van vaste bates	**3 000**	3 000
Oordrag na algemene reserwe	**1 000**	1 000
	5 651	5 350
Inkomste behou aan einde van die jaar	**1 551**	904
	7 202	6 254

INLIGTING TEN OPSIGTE VAN FILIAALMAATSKAPPYE

Belang in filiale

Naam van filiaal	Uitgereikte Kapitaal	Usko-Belang	Usko-belang teen boekwaarde: Aandele 1975	Aandele 1974	Bedrae verskuldig 1975	Bedrae verskuldig 1974
Ingelyf in die Republiek	R		**R**	R	**R**	R
Usko Aluminiumkorporasie (Edms) Beperk	3 000 000	100%	**3 000 000**	3 000 000	**195 115**	342 922
Veldmaster (Edms) Beperk	200 000	100%	**–**	303 391	**4 800 385**	3 908 637
Usko Kabelmaatskappy (Edms) Beperk	500 000	100%	**–**	–	**1 280 192**	912 074
Usko Behuising (Richardsbaai) (Edms) Beperk	150 000	100%	**130 314**	128 837	**23 955**	31 927
Usko Huiselenaars (Edms) Beperk	4	100%	**–**	–	**2 084 549**	1 811 701
Usko Aluminium Systems (Edms) Beperk	100	100%	**100**	100	**(100)**	(100)
Ingelyf in die V.S.A.						
Veldmaster Incorporated	$25 000	100%	**598 803**	–	**(109 766)**	–
			3 729 217	3 432 328	**8 274 330**	7 007 161

Usko se belang in filiaalmaatskappye word getoon teen kosprys min voorsiening vir verliese in filiale.
Die uitgereikte aandelekapitaal van die filiale het gedurende die jaar onveranderd gebly. Usko het sy belang in Usko-Kabelmaatskappy (Edms) Beperk na 100% verhoog (1974–51%).

Totale bedrag van Usko se belang in winste en verliese na belasting in gekonsolideerde filiale	**1975 R'000**	1974 R'000
Totale winste van filiale	**1 737**	957
Totale verliese van filiale	**568**	675

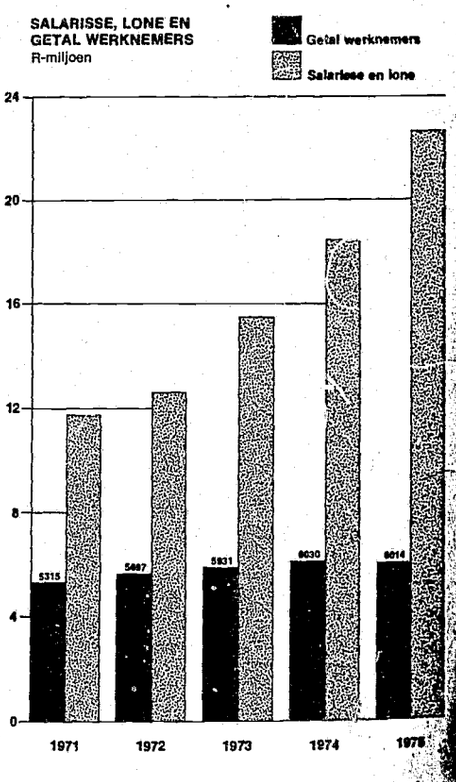
DIREKTEURE SE AANDEELHOUDING

Op 31 Desember 1975 en tot datum van hierdie verslag, het die direkteure en hulle gesinne tot eie voordeel 'n totaal van 2 500 (1974–2 500) gewone aandele in die Korporasie gehou.

Op dieselfde datums was hulle belange as genomineerdes 12 000 (1974–12 000) gewone aandele.

HOUERMAATSKAPPY

Yskor is die Korporasie se houermaatskappy op grond van die meerderheidstemreg gesetel in die voorkeur-aandele.



M. D. Marais
Voorsitter

J. P. Coetzee
Direkteur

24 Februarie 1976.

Staat van Bron en Aanwending van Fondse

vir die jaar geëindig 31 Desember 1975

	USKO R'000	GROEP R'000
BRON VAN FONDSE		
Wins vir die jaar	7 705	9 900
Waardevermindering en ander bedrae afgeskryf	3 436	3 813
FONDSE VERKRY UIT BESIGHEIDSBEDRYWIGHEDE	11 141	13 713
Verkoop van vaste bates	14	675
Betalings ontvang – langtermyndebiteure	–	360
Langtermynlenings aangegaan	1 907	2 136
TOTALE BRON VAN FONDSE	13 062	16 884
AANWENDING VAN FONDSE		
Aankoop van vaste bates	4 194	4 982
Terugbetaling van langtermynlenings	140	166
Vermeerdering in ongenoteerde beleggings	74	74
Vermeerdering van belang in filiaalmaatskappye	1 564	489
Voorskotte aan langtermyndebiteure	–	665
Belasting	2 220	3 357
Dividende	1 651	1 651
Oorplasing na korttermynlenings	2 903	3 412
Netto toename in bedryfskapitaal	316	2 088
TOTALE AANWENDING VAN FONDSE	13 062	16 884
VERANDERINGE IN BEDRYFSKAPITAAL		
Vermeerdering voorraad	5 745	9 173
Vermeerdering oproepbare gelde	551	551
Vermeerdering debiteure	(34)	118
Vermindering korttermynlenings	853	1 356
TOENAME IN BEDRYFSKAPITAAL	7 115	11 198
Vermindering bank en kontant	16	16
Vermeerdering oortrokke bankrekening	347	348
Vermeerdering aandeelhouers vir dividende	301	301
Vermeerdering krediteure	3 232	5 033
Oorplasing vanaf langtermynlenings	2 903	3 412
AFNAME IN BEDRYFSKAPITAAL	6 799	9 110
NETTO TOENAME IN BEDRYFSKAPITAAL	316	2 088

Inkomstestaat

vir die jaar geëindig 31 Desember 1975

	Aantekening	USKO 1975 R'000	USKO 1974 R'000	GROEP 1975 R'000	GROEP 1974 R'000
OMSET	1	114 451	121 178	135 442	134 010
BEDRYFSWINS	14	12 952	10 933	16 476	11 899
Inkomste uit beleggings	16	391	554	391	554
Inkomste uit filiaalmaatskappye	17	1 251	903	–	–
		3 353	2 313	3 721	2 683
Waardevermindering		2 984	3 397	3 159	3 522
Rente betaal op geleende geld	18	465	469	–	–
Voorsiening vir verliese in filiale					
Bedrag afgeskryf van aandele in 'n filiaalmaatskappy	1	87	–	87	–
WINS VOOR BELASTING		7 705	6 211	9 900	6 248
Belasting	19	2 451	930	3 602	1 138
WINS NA BELASTING		5 254	5 281	6 298	5 110
Buite-aandeelhouersgedeelte van verlies in 'n filiaal		–	–	–	116
GROEPWINS		5 254	5 281	6 298	5 226
Inkomste behou aan begin van die jaar		679	748	904	1 028
BESKIKBAAR VIR AANWENDING		5 933	6 029	7 202	6 254
Dividende	20	1 651	1 350	1 651	1 350
Oordrag na verdeelbare reserwes	4	4 000	4 000	4 000	4 000
INKOMSTE BEHOU AAN EINDE VAN DIE JAAR		282	679	1 551	904

Balansstaat

31 Desember 1975

	Aantekening	USKO 1975 R'000	USKO 1974 R'000	GROEP 1975 R'000	GROEP 1974 R'000
KAPITAAL AANGEWEND					
Gewone aandelekapitaal	2	14 505	14 505	14 505	14 505
Verdeelbare reserwes	3	19 094	15 491	20 471	15 807
GEWONE AANDEELHOUERSBELANG		33 599	29 996	34 976	30 312
Voorkeuraandelekapitaal	2	500	500	500	500
TOTALE AANDEELHOUERSBELANG		34 099	30 496	35 476	30 812
Uitgestelde belasting		1 715	1 484	1 902	1 657
Langtermynlenings	5	16 414	17 550	19 816	21 258
TOTALE KAPITAAL AANGEWEND		52 228	49 530	57 194	53 727
AANWENDING VAN KAPITAAL					
VASTE BATES	6	25 299	24 472	31 754	31 078
BELEGGINGS	8	2 781	2 707	2 781	2 707
FILIAALMAATSKAPPYE	9	12 004	10 440	489	–
LANGTERMYNDEBITEURE	10	–	–	2 040	1 808
BEDRYFSBATES					
Voorraad	11	25 933	20 188	33 466	24 293
Debiteure		9 594	9 628	13 507	13 389
Oproepbare gelde en deposito's		1 935	1 384	2 041	1 490
Banksaldo's en kontant		62	78	62	78
TOTALE BEDRYFSBATES		37 524	31 278	49 076	39 250
BEDRYFSLASTE					
Oortrokke bankrekening		4 693	4 346	4 694	4 346
Korttermynlenings		10 050	8 000	10 560	8 504
Krediteure		8 339	6 579	10 668	7 834
Belasting		1 539	67	2 299	100
Aandeelhouers vir dividende		1 631	1 330	1 631	1 330
TOTALE BEDRYFSLASTE		26 252	20 322	29 852	22 114
NETTO BEDRYFSBATES		11 272	10 956	19 224	17 136
UITGESTELDE UITGAWES	12	872	955	906	998
TOTALE AANWENDING VAN KAPITAAL		52 228	49 530	57 194	53 727

Aantekeninge by die Finansiële Jaarstate

31 Desember 1975

1. REKENINGKUNDIGE BELEID

Die belangrikste rekeningkundige beleidspunte van die Groep soos hieronder uiteengesit, is in alle wesenlike opsigte konsekwent nagekom.

Konsolidasiebeginsels

Die gekonsolideerde finansiële state behels die resultate en finansiële stand van die maatskappy en al sy filiale, behalwe dié filiaal vermeld in aantekening 9. Die resultate van filiale word vanaf die effektiewe datums van verkryging ingesluit.

Die oorskot van die kosprys van aandele in elke filiaal bo die netto bates daarvan op datum van verkryging word afgeskryf oor 'n termyn wat as toepaslik geag word vir daardie besondere belegging.

Buitelandse Valuta

Buitelandse bates en laste wat deur valutatermynkontrakte gedek is, is omgereken teen die koerse waarteen gekontrakteer is. Ander buitelandse bates en laste is omgereken teen wisselkoerse wat by benadering gelyk is aan die heersende koerse op die jaareinde.

Omset

Omset verteenwoordig totale netto gefaktureerde verkope, tussenmaatskappytransaksies uitgesluit.

Waardevermindering

Waardevermindering word nie voorsien op nywerheids-, behuisingseiendomme en kapitaaluitbreidings in aanbou nie.

Waardevermindering ten opsigte van ander vaste bates word voorsien op die verminderde saldo of reguitlynmetode teen koerse wat bereken is om die boekwaardes van die bates tot hulle geraamde oorblywende waardes oor hul verwagte nuttige lewensduur te verminder.

Belasting

Normale belasting word bereken op die vlins vir die jaar, nadat beleggings- en aanvangstoelaes op kapitaaluitgawes, grensgebiedtoelaes en belastingverliese van vorige jare in aanmerking geneem is.

Voorsiening vir uitgestelde belasting word teen huidige belastingkoerse gemaak vir die potensiële belastingaanspreeklikheid voortspruitend uit gevalle waar inkomste- en uitgawe-items vir belastingdoeleindes in verskillende finansiële tydperke erken word.

Voorraad

Grondstowwe en verbruiksvoorrade word teen die laagste van kosprys (op 'n eerste-in, eerste-uit-basis) of vervangingswaarde gewaardeer.

Klaarprodukte en onvoltooide werk word teen die laagste van standaardkoste of netto realiseerbare waarde gewaardeer. Standaardkoste behels die koste van grondstowwe, direkte en indirekte bokoste, en is by benadering gelyk aan kosprys, op 'n eerste-in, eerste-uit basis bereken. Voorsiening word vir verouderde en stadigbewegende voorraad gemaak.

	USKO		GROEP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
2. AANDELEKAPITAAL gemagtig, uitgereik en ten volle opbetaal				
125 000 „A"-voorkeuraandele van R2 elk	250	250	250	250
125 000 „B"-voorkeuraandele van R2 elk	250	250	250	250
	500	500	500	500
29 010 000 Gewone aandele van 50 sent elk	14 505	14 505	14 505	14 505
	15 005	15 005	15 005	15 005
3. VERDEELBARE RESERWES				
Reserwe vir vervanging van vaste bates	10 552	7 552	10 620	7 603
Algemene reserwe	8 260	7 260	8 300	7 300
Inkomste behou	282	679	1 551	90[illegible]
	19 094	15 491	20 471	15 [illegible]

Aantekeninge by die Finansiële Jaarstate

	USKO		GROEP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
4. BEWEGINGS OP VERDEELBARE RESERWES				
Oordrag na reserwe vir vervanging van vaste bates	3 000	3 000	3 000	3 000
Oordrag na algemene reserwe	1 000	1 000	1 000	1 000
	4 000	4 000	4 000	4 000
Oorskot van voorsiening vir waardevermindering as gevolg van herwaardering van aanleg in 'n filiaalmaatskappy oorgedra na reserwe vir vervanging van vaste bates met konsolidasie	–	–	17	17
	4 000	4 000	4 017	4 017
5. LANGTERMYNLENINGS				
5.1 **Oorsese lenings**				
Wentelkredietlening. Die fasiliteit van hierdie lening verminder met die helfte op 6 Februarie 1977 en die balans verval op 6 Februarie 1978. Huidige effektiewe rentekoers 7,62 persent per jaar, drie- of ses-maandeliks hersienbaar. Hierdie lening is gedek deur 'n valutatermynkontrak en die effektiewe rentekoerse sluit die koste van hierdie dekking in	5 814	5 954	5 814	5 954
Vastetermynlening terugbetaalbaar in twee gelyke paaiemente op 7 November 1976 en 7 November 1977. Effektiewe rentekoers 10 persent per jaar. Hierdie lening is gedek deur 'n valutatermynkontrak en die effektiewe rentekoers sluit die koste van hierdie dekking in	5 633	5 633	5 633	5 633
Vastetermynlening terugbetaalbaar in agtien gelyke kwartaallikse paaiemente van R21 794 tot 30 Junie 1980. Huidige rentekoers 7,25 persent per jaar, kwartaalliks hersienbaar.	392	–	392	
5.2 **Plaaslike lenings**				
Vastetermynlening terugbetaalbaar in drie gelyke jaarlikse paaiemente vanaf 1 Junie 1979. Rentekoers 9,5 persent per jaar	4 000	4 000	4 000	4 000
Vastetermynlening terugbetaalbaar in twee gelyke paaiemente op 1 Oktober 1978 en 1 Oktober 1979. Rentekoers 12,5 persent per jaar	1 800	1 800	1 800	1 800
Vastetermynlening terugbetaalbaar in nege-en-vyftig gelyke maandelikse paaiemente van R16 700 en 'n finale paaiement van R14 700. Die eerste paaiement is betaalbaar op 1 Januarie 1977. Huidige rentekoers 10 persent per jaar, sesmaandeliks hersienbaar	1 000	–	1 000	–
Vastetermynlening terugbetaalbaar binne tien jaar vanaf 1976. Hierdie bedrag verteenwoordig voorskotte op die lening. Die totale bedrag van die lening en paaiemente is aan onderhandeling onderworpe	678	163	678	163

Aantekeninge by die Finansiële Jaarstate

	USKO		GROEP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
5.3 Grensgebiedlenings aan filiaalmaatskappye, gewaarborg deur Usko				
Nr. 1 aan filiaalmaatskappy ten opsigte van grond en geboue, terugbetaalbaar in agt-en-twintig gelyke kwaartaallikse paaiemente van R65 750. Rentevry tot 28 Oktober 1976 en daarna teen 6 persent per jaar	–	–	1 841	2 104
Nr. 2 aan 'n filiaalmaatskappy ten opsigte van aanleg en masjinerie, terugbetaalbaar in twintig gelyke kwartaallikse paaiemente van R52 187. Rente teen 4 persent per jaar tot 28 Oktober 1976 en daarna teen 6 persent per jaar	–	–	1 044	1 253
Behuisingslenings terugbetaalbaar in gelyke maandelikse paaiemente van R5 261 (insluitende rente) oor twintig jaar tot 1992. Huidige rentekoers 6 tot 6,75 persent per jaar. Hierdie lenings is verseker deur eerste verbande oor behuisingseiendomme	–	–	644	681
5.4 Ander behuisingslenings				
Verseker – Nr. 1 terugbetaalbaar in gelyke maandelikse paaiemente van R2 646 (insluitende rente) tot 2003. Rentekoers 10,5 tot 12 persent per jaar. Verseker deur eerste verbande oor behuisingseiendomme	–	–	251	110
Nr. 2 terugbetaalbaar in gelyke maandelikse paaiemente van R1 010 (insluitende rente) tot 1987 Rentekoers 12 persent per jaar. Verseker deur eerste verband oor vaste eiendom	–	–	75	–
Onverseker – terugbetaalbaar in gelyke maandelikse paaiemente van R824 (insluitende rente) tot 1982. Rentekoers 6,5 persent per jaar	–	–	56	63
	19 317	17 550	23 228	21 761
Min paaiemente terugbetaalbaar binne een jaar ingesluit by korttermynlenings	2 903	–	3 412	503
	16 414	17 550	19 816	21 258
6. VASTE BATES				
6.1 Kosprys				
Nywerheidseiendom en verbeteringe daaraan	131	131	939	901
Nywerheidsgeboue en sylyne	10 020	9 694	12 131	11 806
Behuisingseiendomme	267	267	1 403	1 257
Aanleg en masjinerie	40 847	37 981	44 765	41 833
Kantoormeubels, toerusting en motorvoertuie	672	629	714	671
Kapitaaluitbreidings in aanbou	1 859	941	1 990	1 123
	53 796	49 643	61 942	57 591
6.2 Opgehoopte waardevermindering				
Nywerheidseiendom en verbeteringe daaraan	79	79	79	79
Nywerheidsgeboue en sylyne	4 768	4 491	5 119	4 754
Behuisingseiendomme	188	184	188	184
Aanleg en masjinerie	23 025	20 012	24 340	21 071
Kantoormeubels, toerusting en motorvoertuie	437	405	462	423
Kapitaaluitbreidings in aanbou	–	–	–	–
	28 497	25 171	30 188	26 511

Aantekeninge by die Finansiële Jaarstate

	USKO		GROEP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
6.3 **Boekwaarde**				
Nywerheidseiendom en verbeteringe daaraan	52	52	860	822
Nywerheidsgeboue en sylyne	5 252	5 203	7 012	7 052
Behuisingseiendomme	79	83	1 215	1 073
Aanleg en masjinerie	17 822	17 969	20 425	20 762
Kantoormeubels, toerusting en motorvoertuie	235	224	252	246
Kapitaaluitbreidings in aanbou	1 859	941	1 990	1 123
	25 299	24 472	31 754	31 078

6.4 Aanleg en geboue van sekere filiaalmaatskappye (boekwaarde R4 195 000 1974–R4 473 000) is opgerig op grond wat deur hierdie filiaalmaatskappye gekoop is, maar wat nog nie in hulle name geregistreer is nie.

6.5 Behuisingseiendomme met 'n boekwaarde van R986 000 (1974–R683 000) is onderworpe aan eerste verbande ten gunste van krediteure vir behuisingslenings.

6.6 Registers van eiendomme en geboue is beskikbaar ter insae van iede of hulle behoorlik gemagtigde verteenwoordigers by die geregistreerde kantoor van die Korporasie.

7. VERPLIGTINGE				
Kontrakte vir kapitaaluitgawes	4 542	2 080	4 546	3 319
Verder het die direkteure die aankoop van geboue en aanleg gemagtig waarvoor kontrakte nog nie aangegaan is nie	1 188	4 160	1 463	4 798
Bogenoemde kapitaaluitgawes sal gefinansier word uit kontantvloei en addisionele leningsfasiliteite				
	5 730	6 240	6 009	8 117
8. BELEGGINGS TEEN KOSPRYS				
Genoteer				
National Bolts Beperk 631 125 aandele van 50 sent elk (Markwaarde R694 000 (1974–R631 000))	506	506	506	506
Ongenoteer				
Gesamentlike onderneming in Transvaal				
Copper Rod Co.	1 014	940	1 014	940
National Materials Service Corporation (Edms) Beperk	750	750	750	750
Hall & Pickles (Coastal) (Edms) Beperk	40	40	40	40
Veldmaster (Rhodesia) (Pvt) Limited	46	46	46	46
Alustang (Edms) Beperk	425	425	425	425
(Direkteurswaardasie van ongenoteerde beleggings R3 175 000 (1974–R2 201 000))				
	2 275	2 201	2 275	2 201
	2 781	2 707	2 781	2 707

Aantekeninge by die Finansiële Jaarstate

	USKO		GROEP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
9. FILIAALMAATSKAPPYE				
Aandele teen kosprys	4 412	3 891	599	–
Bedrae verskuldig deur filiale	9 375	7 152	–	–
	13 787	11 043	599	–
Min voorsiening vir verliese	1 068	603	–	–
	12 719	10 440	599	–
Min bedrae verskuldig aan filiale	715	–	110	–
	12 004	10 440	489	–
Die resultate van Veldmaster Incorporated vir die ses maande sedert oorname tot 31 Desember 1975 is nie gekonsolideer nie aangesien geouditeerde finansiële state nie beskikbaar is nie en dit nie van wesenlike belang met betrekking tot die finansiële toestand en die resultate van Usko geag word nie.				
10. LANGTERMYNDEBITEURE				
Verseker deur verbande			303	426
Verseker deur huurkoopooreenkomste			1 737	1 382
			2 040	1 808
Hierdie sluit in bedrae verskuldig deur werknemers ten opsigte van behuisingseiendomme wat kragtens die Korporasie se behuisingskemas verkoop is en is terugbetaalbaar in maandelikse paaiemente wat strek oor termyne van tot vyf-en-twintig jaar.				
11. VOORRAAD				
Grondstowwe	7 666	7 279	11 108	9 355
Verbruiksvoorrade	4 640	3 045	5 042	3 303
Onvoltooide werk	9 926	7 762	12 518	8 839
Klaarprodukte	3 701	2 102	4 798	2 796
	25 933	20 188	33 466	24 293
12. UITGESTELDE UITGAWES				
Inbedryfstellingskoste op nuwe staalsmeltaanleg afgeskryf oor vyf jaar vanaf 1973	371	557	371	557
Wisselkoersverskille en bestuursgelde op oorsese langtermynlenings afgeskryf oor termyn van die lenings	107	206	107	206
Groot herstelwerk afgeskryf oor 'n tydperk van een tot vyf jaar	394	19	428	235
	872	955	906	998
13. VOORWAARDELIKE AANSPREEKLIKHEDE				
Waarborge aan bouverenigings vir werknemersbehuisingslenings	1 415	1 108	1 415	1 108
Wissels verdiskonteer	1 219	–	219	–
Waarborg van lenings toegestaan aan verwante maatskappye	1 275	450	1 275	450
14. BEDRYFSWINS				
Bedryfswins is verkry nadat die volgende items in berekening gebring is:				
Wins/(Verlies) op vervreemding van vaste bates	3	(15)	4	(18)
Ouditeursvergoeding – ouditgelde	30	20	39	29
Huur van toerusting	298	233	299	234
Sekretariële gelde	35	33	35	33

Aantekeninge by die Finansiële Jaarstate

	USKO		GROEP	
	1975 R'000	1974 R'000	1975 R'000	1974 R'000
15. BESOLDIGING VAN DIREKTEURE				
Vir dienste as direkteure	26	26		
Vir ander dienste	35	35		
	61	61		
16. INKOMSTE UIT BELEGGINGS				
Genoteer	88	75	88	75
	423	479	423	479
Ongenoteer				
Min: Dividend in die vorige jaar voorgestel, nie verklaar nie	120	–	120	–
	303	479	303	479
	391	554	391	554
17. INKOMSTE UIT FILIAALMAATSKAPPYE				
Dividende	800	500		
Rente	401	285		
Huurgelde	50	–		
Bestuursvergoeding	–	118		
	1 251	903		
18. RENTE BETAAL OP GELEENDE GELD				
Langtermynlenings	1 871	1 940	1 986	2 056
Ander	1 113	1 457	1 173	1 466
	2 984	3 397	3 159	3 522
19. BELASTING				
Suid-Afrikaanse normale belasting – huidige jaar	2 285	65	3 457	100
Aansuiwering – vorige jaar	(65)	–	(100)	–
Uitgestelde belasting – huidige jaar	231	1 240	245	1 413
Aansuiwering – vorige jare	–	(375)	–	(375)
	2 451	930	3 602	1 138
20. DIVIDENDE				
„A"- en „B"-voorkeuraandele				
Betaal 8 sent per aandeel (4%) (1974–8 sent)	20	20	20	20
Voorgestel 14 sent per aandeel (7%) (1974–10 sent)	35	25	35	25
	55	45	55	45
Gewone aandele				
Voorgestel 5,5 sent per aandeel (11%) (1974–4,5 sent)	1 596	1 305	1 596	1 305
	1 651	1 350	1 651	1 350

Vyfjaaroorsig van Groep

	1975	1974	1973	1972	1971
BEDRYFSRESULTATE (R000'e)					
Staalverkope	73 275	55 996	44 532	32 615	31 067
Koper- en aluminiumverkope	62 167	78 014	59 671	44 284	39 367
Totale verkope	135 442	134 010	104 203	76 899	70 434
Wins voor belasting	9 900	6 364	1 425	751	2 735
Belasting en uitgestelde belasting	3 602	1 138	557	(425)	1 076
Wins na belasting	6 298	5 226	868	1 176	1 659
Dividende	1 651	1 350	40	40	983
Inkomste behou vir die tydperk	4 664	3 893	862	1 136	676
FINANSIËLE INLIGTING (R000'e)					
Bedryfsbates	49 076	39 250	29 522	29 840	25 433
Bedryfslaste	29 852	22 114	16 724	10 725	11 987
Bedryfskapitaal	19 224	17 136	12 798	19 115	13 446
Ander bates	6 216	5 513	5 688	5 337	3 352
Netto vaste bates	31 754	31 078	29 963	24 018	15 951
Ander laste	21 718	22 915	21 530	22 413	7 828
Aandeelhouersbelang	35 476	30 812	26 919	26 057	24 921
BRON VAN FONDSE					
Aandeelhouersbelang	40,8	40,6	41,3	44,1	55,7
Ander laste	25,0	30,2	33,0	37,9	17,5
Bedryfslaste	34,2	29,2	25,7	18,0	26,8
	100,0%	100,0%	100,0%	100,0%	100,0%
AANWENDING VAN FONDSE					
Debiteure	15,5	17,7	20,2	17,5	19,2
Voorraad	38,4	32,0	24,6	24,1	36,4
Vaste bates teen boekwaarde	36,5	41,0	46,0	40,6	35,7
Ander bates	9,6	9,3	9,2	17,8	8,7
	100,0%	100,0%	100,0%	100,0%	100,0%
KERNDATA					
Salarisse en lone (R000'e)	22 773	18 470	15 519	12 651	11 898
Getal werknemers	6 014	6 030	5 931	5 697	5 315
Getal gewone aandele (000'e)	29 010	29 010	29 010	29 010	29 010
Fondse uit bedrywighede (R00	13 713	9 294	3 923	2 700	2 991
Verdienste per gewone aandee	21,52c	17,86c	2,85c	3,92c	5,58c
Dividende per gewone aandeel	5,50c	4,50c	–	–	3,25c
Inkomste behou per gewone aandeel	16,02c	13,36c	2,85c	3,92c	2,33c
Netto waarde per gewone aandeel	120,57c	104,49c	91,06c	88,10c	84,18c
Dividenddekking	3,9	4,0	–	–	1,7
Bedryfsverhouding	1,6:1	1,8:1	1,8:1	2,8:1	2,1:1
Belaste wins op aandeelhouersbelang	18,0%	17,0%	3,2%	4,5%	6,6%
Verkope (groei)	1,1%	28,6%	35,5%	9,2%	(5,9%)
Aandeelhouersbelang (groei)	15,1%	14,5%	3,3%	4,6%	2,8%

Designed by Group Editors and Printed by Rufus & Joubert

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- functions and major product groups -

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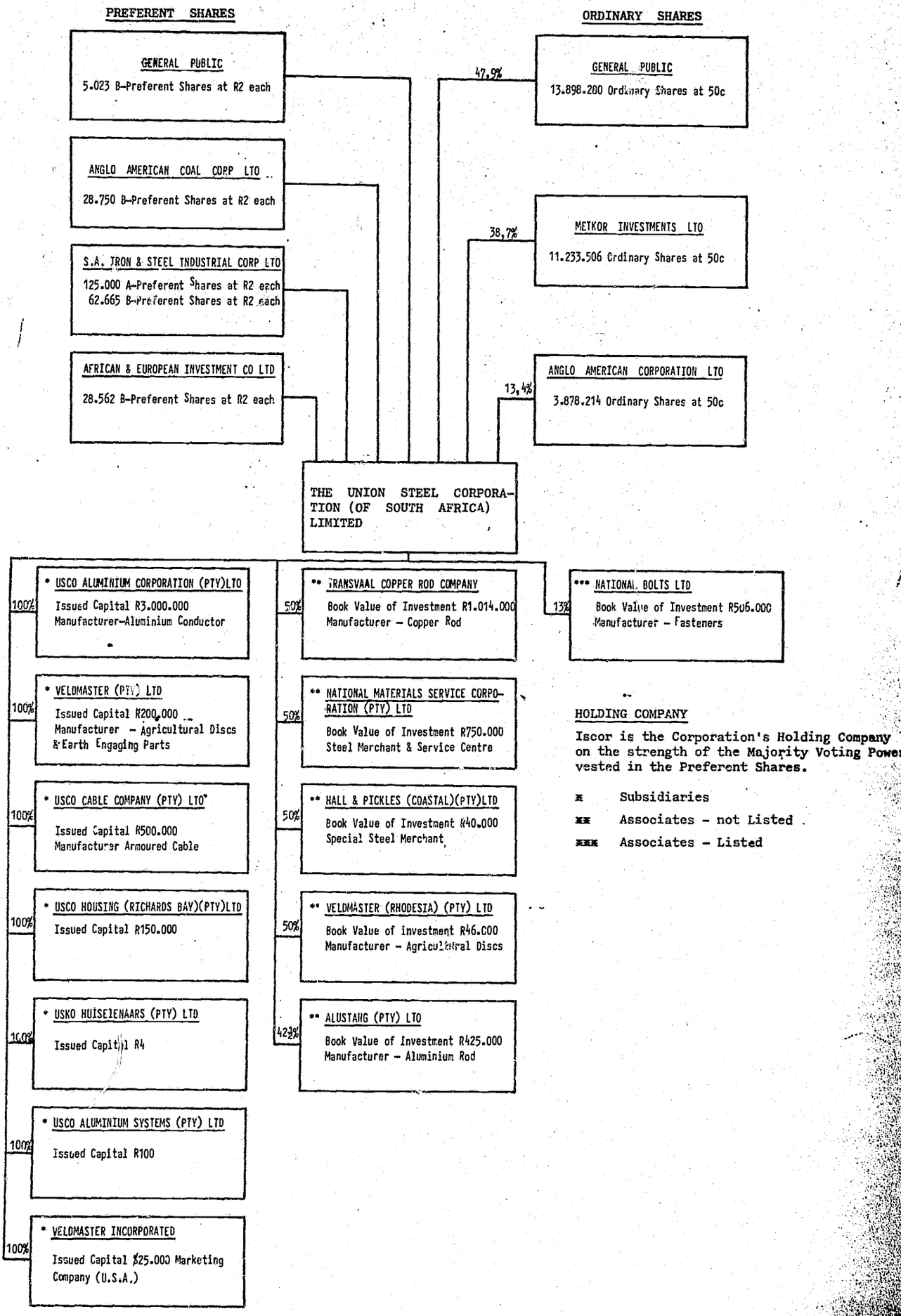
B. KLIP WORKS : SPECIAL STEELS, HOLLOW DRILL AND FORGINGS

SHAREHOLDING, SUBSIDIARY AND ASSOCIATE COMPANIES OF THE UNION STEEL CORPORATION (OF S.A.) LTD.



HOLDING COMPANY

Iscor is the Corporation's Holding Company on the strength of the Majority Voting Power vested in the Preferent Shares.

* Subsidiaries

** Associates - not Listed

*** Associates - Listed

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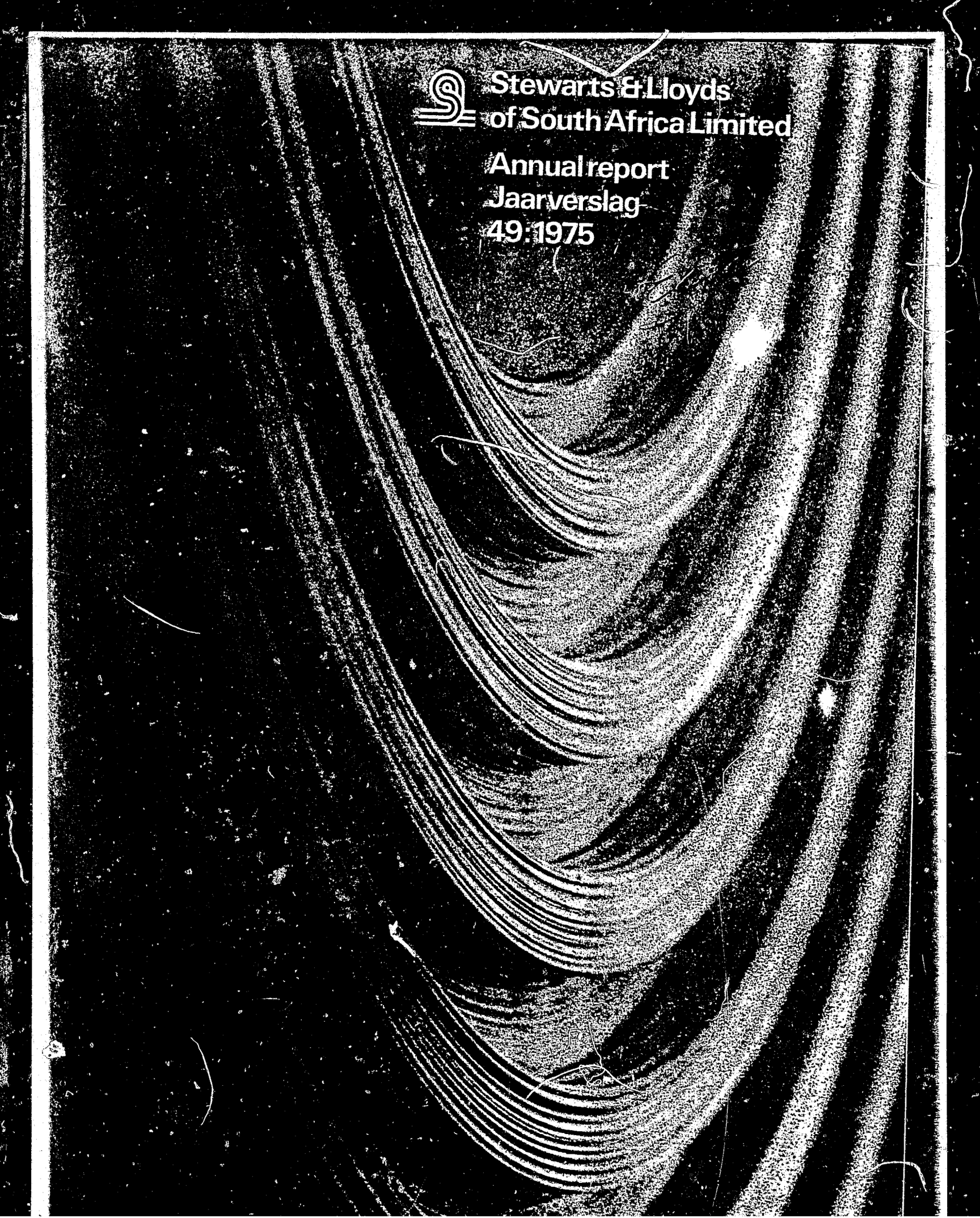
Stewarts & Lloyds
of South Africa Limited
Annual report
Jaarverslag
49:1975

Stewarts & Lloyds of South Africa Limited

Stewarts & Lloyds of South Africa Limited, a subsidiary of International Pipe and Steel Investments (Pty) Ltd, is quoted on The Johannesburg Stock Exchange.
Coiled Iscor steel, the material used by Tosa, the Vereeniging-based tube manufacturing company and by Baldwins at its steel service centre at Brakpan, is the motif for the cover of this report. Tosa and Baldwins, both members of the Stewarts & Lloyds Group, market materials that are extensively used in the industrial, building and agricultural sectors of the South African economy.
In recent years, the Stewarts & Lloyds Group has expanded and now incorporates 26 operating companies contained in one trading and three manufacturing divisions, employing approximately 12 000 people.
The Trading Division operates 74 sales branches throughout Southern Africa. In addition, where appropriate to their products and their markets, many of the units of the Tubes, Foundry and Manufactured Products Divisions sell direct to end users and to independent merchant stockholders, thus providing wide distribution for their products.
Illustrations in this report show the diverse range of products manufactured and sold in Southern Africa and exported to many parts of the world.

Stewarts & Lloyds of South Africa Limited, 'n filiaal van International Pipe and Steel Investments (Pty) Ltd, word op Die Johannesburgse Effektebeurs genoteer.
Yskor-rolstaal, die materiaal wat gebruik word deur Tosa, die pypvervaardigende maatskappy in Vereeniging geleë en deur Baldwins by sy staaldienssentrum by Brakpan, is die motief vir die omslag van hierdie verslag. Tosa en Baldwins, albei lede van die Stewarts & Lloyds-groep, bemark materiale wat op groot skaal gebruik word in die industriële-, bou- en landbousektore van die Suid-Afrikaanse ekonomie.
In die laaste jare het die Stewarts & Lloyds-groep uitgebrei en sluit nou 26 bedryfsmaatskappye in wat in een handels- en drie vervaardigingsafdelings omvat word en wat omtrent 12 000 mense in diens het.
Die Handelsafdeling het 74 afsettakke dwarsdeur Suid-Afrika in bedryf. Hierbenewens, verkoop baie van die eenhede van die Pyp-, Gietery- en Vervaardigingsafdeling, na gelang van hulle produkte en hulle markte, regstreeks aan die eindverbruikers en onafhanklike handelaars, en verseker hierdeur uitgebreide verspreiding vir hulle produkte.
Illustrasies in hierdie verslag toon die uitgebreide reeks produkte wat in Suider-Afrika vervaardig en verkoop word en na baie wêrelddele uitgevoer word.

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Bright drawn steel bar.
Blinkgetrokke staalstaaf.

Notice of meeting

Notice is hereby given that the forty-ninth annual general meeting of members of Stewarts & Lloyds of South Africa Limited will be held at the Johannesburg office of the Company, 36 Simmonds Southway, Park Central, Johannesburg, on Friday, 27 February 1976, at 12h30.

1 To receive and consider the following for the year ended 30 September 1975:

a Balance sheet and income statement of the Company.

b Consolidated balance sheet and consolidated income statement of the Company and its subsidiary companies.

c Directors' and auditors' reports.

2 To elect directors in the place of those retiring.

3 To approve the fees payable to directors.

4 To fix the remuneration of the auditors for the year ended 30 September 1975.

5 To transact any other business which may be transacted at an annual general meeting.

A member entitled to attend and vote at the above-mentioned meeting is entitled to appoint a proxy to attend and speak and on a poll to vote in his stead. A proxy need not be a member of the Company.

Proxy forms should be forwarded to reach the registered office of the Company not less than 48 hours before the time of holding the meeting.

For the purpose of determining those shareholders entitled to attend and vote at the meeting the Register of Members will be closed from 21 to 27 February 1976, both dates inclusive.

By order of the Board
E. A. Johnson, Group secretary
Registered office:
Corner Voortrekker Street and
Rhodes Avenue
P.O. Box 74
Vereeniging
1930
4 December 1975

Kennisgewing van vergadering

Kennis geskied hiermee dat die nege-en-veertigste algemene jaarvergadering van lede van Stewarts & Lloyds of South Africa Limited om 12 30 op Vrydag, 27 Februarie 1976 by die Johannesburgse kantoor van die Maatskappy, Simmonds-suidweg 36, Park Central, Johannesburg gehou sal word.

1 Vir die ontvangs en oorweging van die volgende stukke vir die jaar geëindig 30 September 1975:

a Balansstaat en inkomstestaat van die Maatskappy.

b Gekonsolideerde balansstaat en gekonsolideerde inkomstestaat van die Maatskappy en sy filiaal-maatskappye.

c Verslae van die direkteure en die ouditeure.

2 Om direkteure te kies in die plek van dié wat uittree.

3 Om direkteursgelde goed te keur.

4 Vir die bepaling van die vergoeding aan die ouditeure vir die jaar wat op 30 September 1975 geëindig het.

5 Om enige ander sake af te handel wat op 'n algemene jaarvergadering verrig kan word.

'n Lid wat daarop geregtig is om bogemelde vergadering by te woon en aldaar te stem, is geregtig om 'n gevolmagtigde aan te stel om namens hom die vergadering by te woon, daartydens te praat, en by 'n stemming namens hom te stem. 'n Gevolmagtigde hoef nie lid van die Maatskappy te wees nie.

Volmagvorms moet die geregistreerde kantoor van die Maatskappy bereik nie minder as 48 uur voor die aanvang van die vergadering nie. Die lederegister sal van 21 tot 27 Februarie 1976, beide datums inbegrepe, gesluit wees, sodat daar bepaal kan word watter aandeelhouers daarop geregtig is om die vergadering by te woon en daarby te stem.

Op las van die Raad
E. A. Johnson, Groepsekretaris
Geregistreerde kantoor:
H/v Voortrekkerstraat en Rhodeslaan
Posbus 74
Vereeniging
1930
4 Desember 1975

Report of the auditors

To the members of Stewarts & Lloyds of South Africa Limited

We have examined the financial statements set out on pages 10 to 20 and 34 to 49 and, in our opinion, these statements fairly present the financial position of the company and its subsidiaries and the results of their operations in the manner required by the Companies Act, 1973.

We have also examined the statement of group results and financial position adjusted for the effect of inflation set out on pages 50 to 52 which have been prepared in accordance with the methods described in the notes thereto. In our opinion, this statement fairly restates in summarised form the results for the period and the financial position of the group expressed in terms of the general purchasing power of money at 30 September 1975.

Deloitte & Co.
Chartered Accountants (S.A.)
Johannesburg, 4 December 1975

Verslag van die ouditeure

Aan die lede van Stewarts & Lloyds of South Africa Limited

Ons het die finansiële state soos op bladsye 10 tot 20 en 34 tot 49 uiteengesit, nagegaan en, na ons mening, verstrek hierdie state 'n redelike weergawe van die finansiële stand van die maatskappy en sy filiale en die resultate van hulle bedrywighede op die wyse wat deur die Maatskappywet, 1973 vereis word.

Ons het ook die staat van groepresultate en finansiële stand, soos aangepas vir die uitwerking van inflasie, nagegaan. Hierdie aangesuiwerde resultate is op bladsye 50 tot 52 uiteengesit en is voorberei ooreenkomstig die metodes in die aantekeninge daartoe beskryf. Na ons mening is dié staat 'n redelike weergawe in opgesomde vorm van die resultate vir die tydperk en die finansiële stand van die groep, uitgedruk kragtens die algemene koopkrag van geld op 30 September 1975.

Deloitte & Kie
Geoktrooieerde Rekenmeesters (S.A.)
Johannesburg, 4 Desember 1975

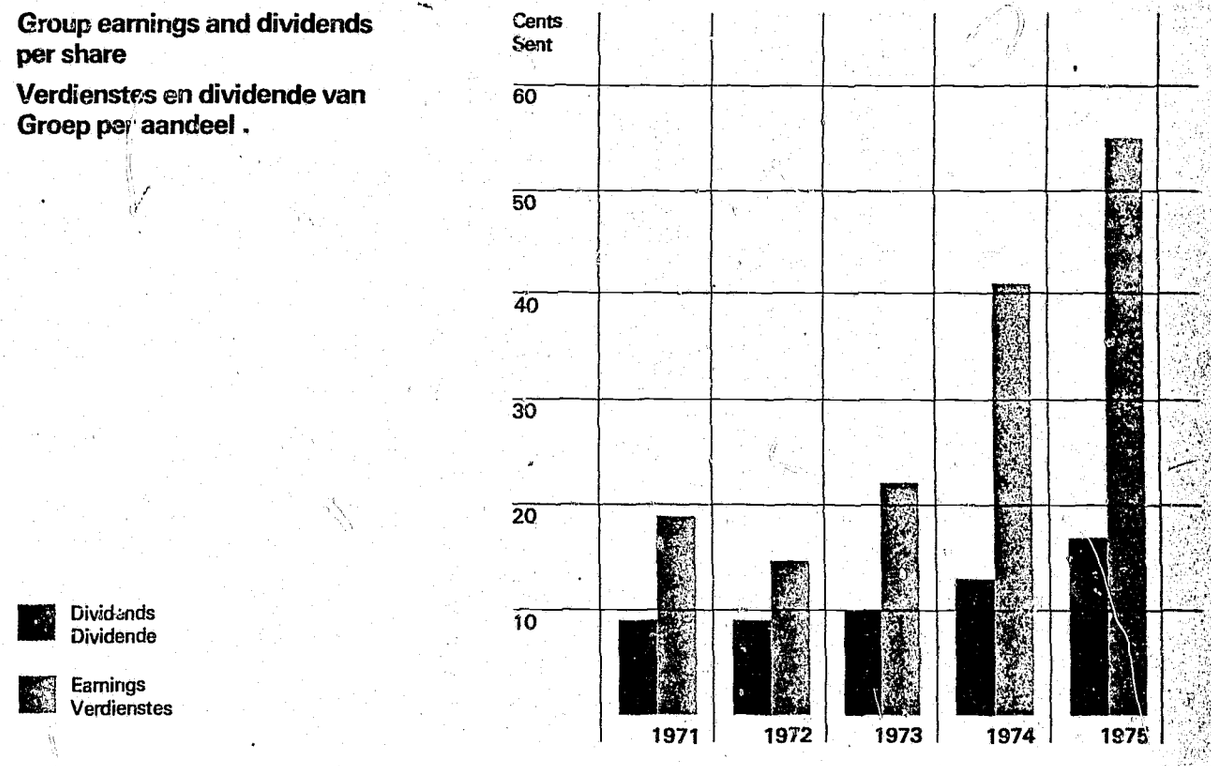
Financial highlights

Finansiële hoogtepunte

	1975	1974	1973	1972	1971	
Sales: R000	**204 967**	179 265	136 948	112 030	108 290	Verkope: R000
Operating surplus before tax: R000	**21 441**	17 873	9 606	5 893	7 467	Bedryfsinkomste voor belasting: R000
Earnings per share: cents	**54,9**	41,0	22,1	14,6	18,8	Verdienste per aandeel: sent
Dividend per share: cents	**17**	13	10	9	9	Dividende per aandeel: sent
Net assets per share: cents	**299**	259	233	219	208	Netto bates per aandeel: sent
Liquidity ratio	**1,84**	1,38	1,62	1,57	1,16	Vloeibaarheidsverhouding

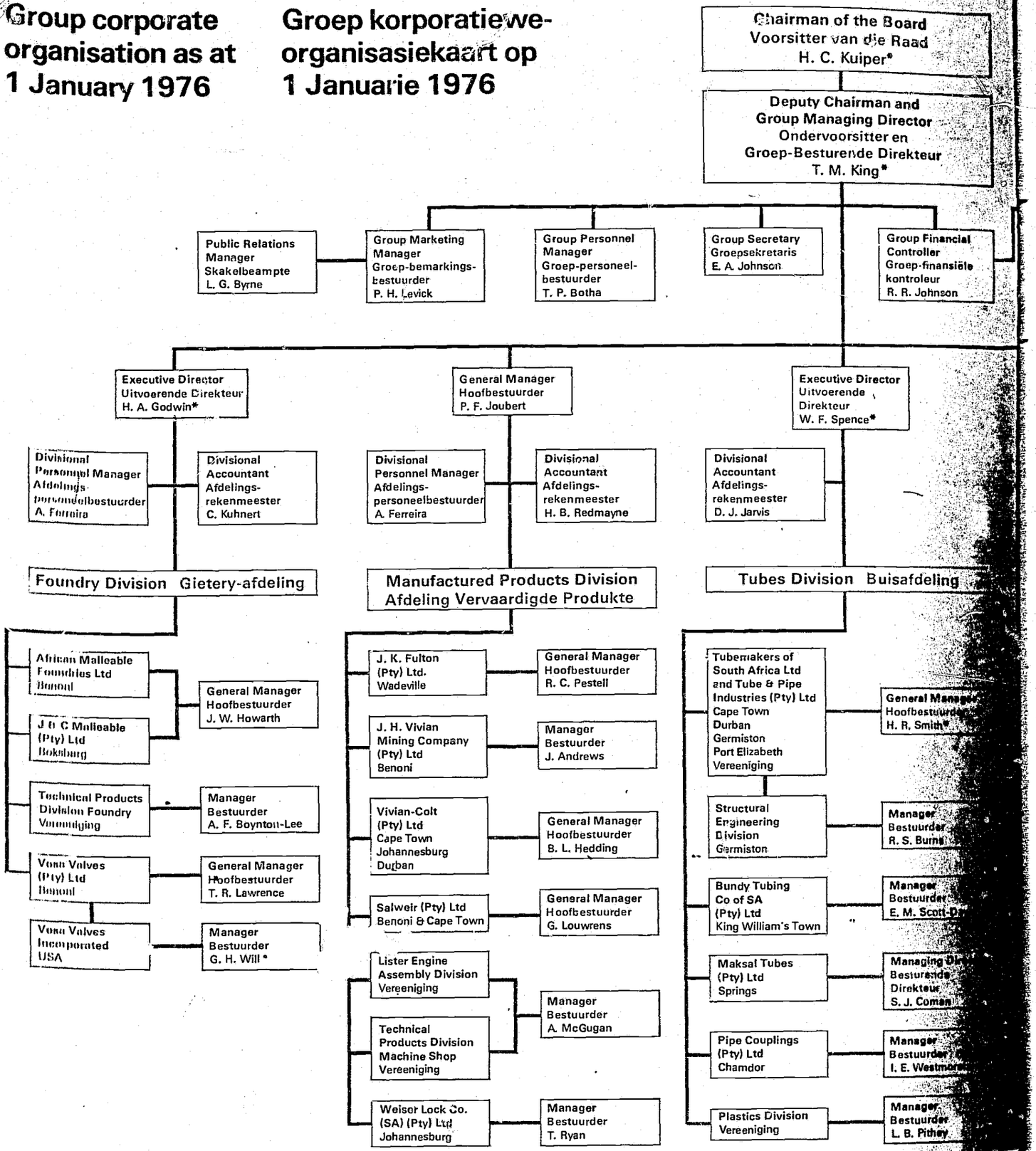
Group earnings and dividends per share

Verdienstes en dividende van Groep per aandeel

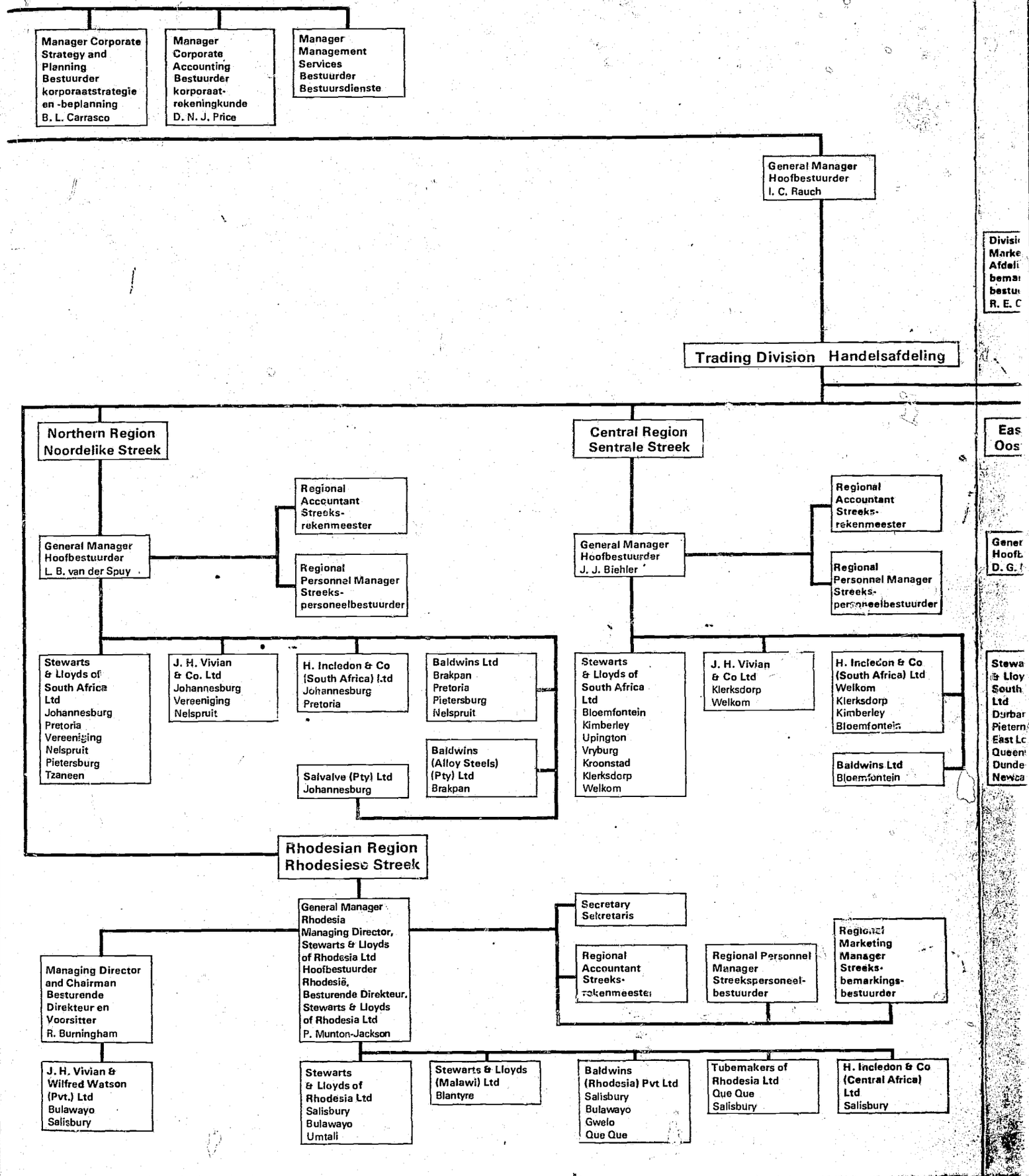


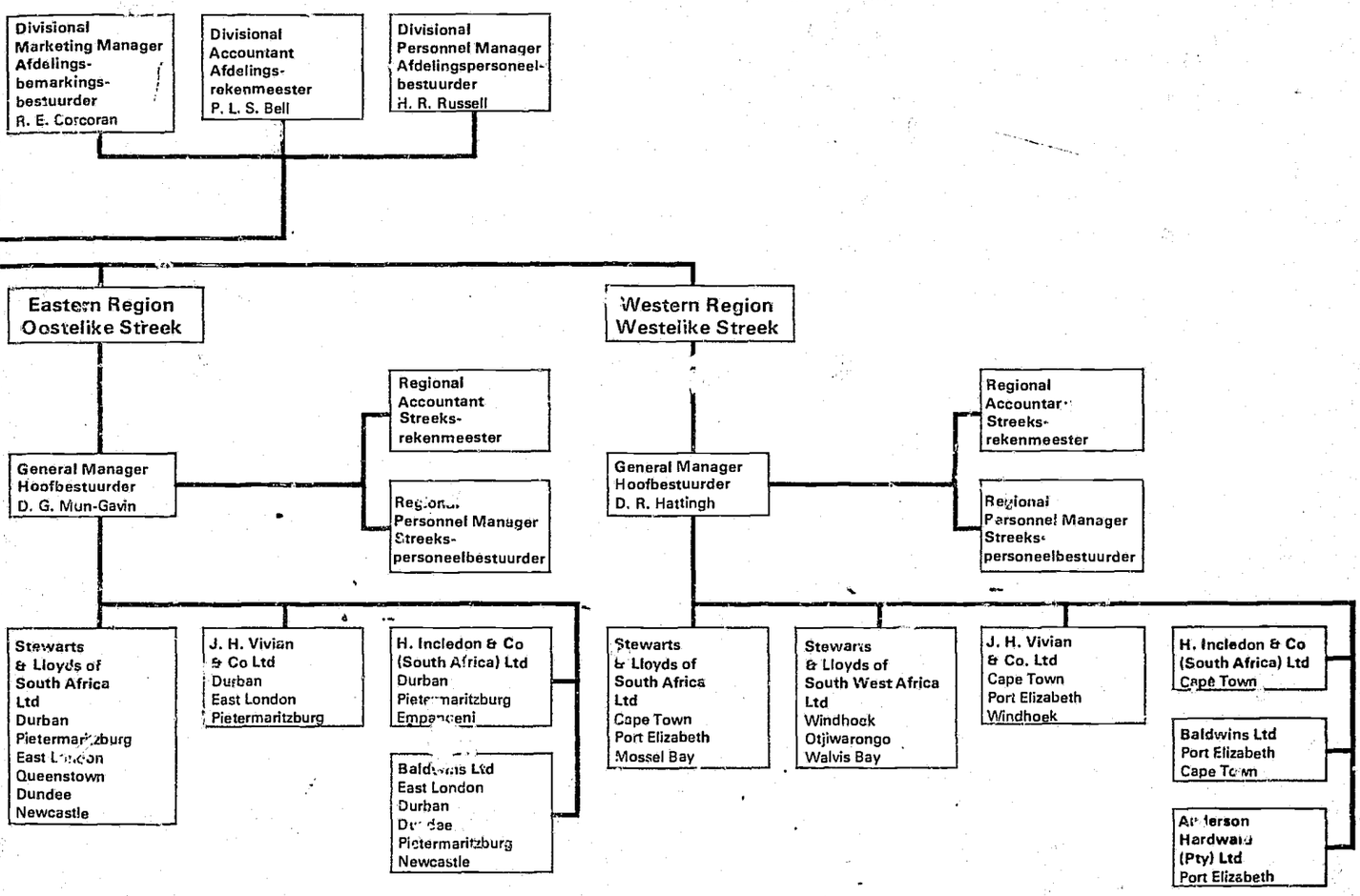
Group corporate organisation as at 1 January 1976

Groep korporatiewe-organisasiekaart op 1 Januarie 1976



*Directors of Stewarts & Lloyds of South Africa Limited.
*Direkteure van Stewarts & Lloyds of South Africa Limited.


Manager Corporate Strategy and Planning
Bestuurder korporaatstrategie en -beplanning
B. L. Carrasco
Manager Corporate Accounting
Bestuurder korporaat-rekeningkunde
D. N. J. Price
Manager Management Services
Bestuurder Bestuursdienste
General Manager
Hoofbestuurder
I. C. Rauch
Trading Division Handelsafdeling
Northern Region
Noordelike Streek
Regional Accountant
Streeks-rekenmeester
General Manager
Hoofbestuurder
L. B. van der Spuy
Regional Personnel Manager
Streeks-personeelbestuurder
Stewarts & Lloyds of South Africa Ltd
Johannesburg
Pretoria
Vereeniging
Nelspruit
Pietersburg
Tzaneen
J. H. Vivian & Co. Ltd
Johannesburg
Vereeniging
Nelspruit
H. Incledon & Co (South Africa) Ltd
Johannesburg
Pretoria
Baldwins Ltd
Brakpan
Pretoria
Pietersburg
Nelspruit
Baldwins (Alloy Steels) (Pty) Ltd
Brakpan
Salvalve (Pty) Ltd
Johannesburg
Central Region
Sentrale Streek
Regional Accountant
Streeks-rekenmeester
General Manager
Hoofbestuurder
J. J. Biehler
Regional Personnel Manager
Streeks-personeelbestuurder
Stewarts & Lloyds of South Africa Ltd
Bloemfontein
Kimberley
Upington
Vryburg
Kroonstad
Klerksdorp
Welkom
J. H. Vivian & Co Ltd
Klerksdorp
Welkom
H. Incledon & Co (South Africa) Ltd
Welkom
Klerksdorp
Kimberley
Bloemfontein
Baldwins Ltd
Bloemfontein
Rhodesian Region
Rhodesiese Streek
General Manager Rhodesia
Managing Director, Stewarts & Lloyds of Rhodesia Ltd
Hoofbestuurder Rhodesië, Besturende Direkteur, Stewarts & Lloyds of Rhodesia Ltd
P. Munton-Jackson
Secretary
Sekretaris
Regional Accountant
Streeks-rekenmeester
Regional Personnel Manager
Streekspersoneel-bestuurder
Regional Marketing Manager
Streeks-bemarkingsbestuurder
Managing Director and Chairman
Besturende Direkteur en Voorsitter
R. Burningham
J. H. Vivian & Wilfred Watson (Pvt.) Ltd
Bulawayo
Salisbury
Stewarts & Lloyds of Rhodesia Ltd
Salisbury
Bulawayo
Umtali
Stewarts & Lloyds (Malawi) Ltd
Blantyre
Baldwins (Rhodesia) Pvt Ltd
Salisbury
Bulawayo
Gwelo
Que Que
Tubemakers of Rhodesia Ltd
Que Que
Salisbury
H. Incledon & Co (Central Africa) Ltd
Salisbury

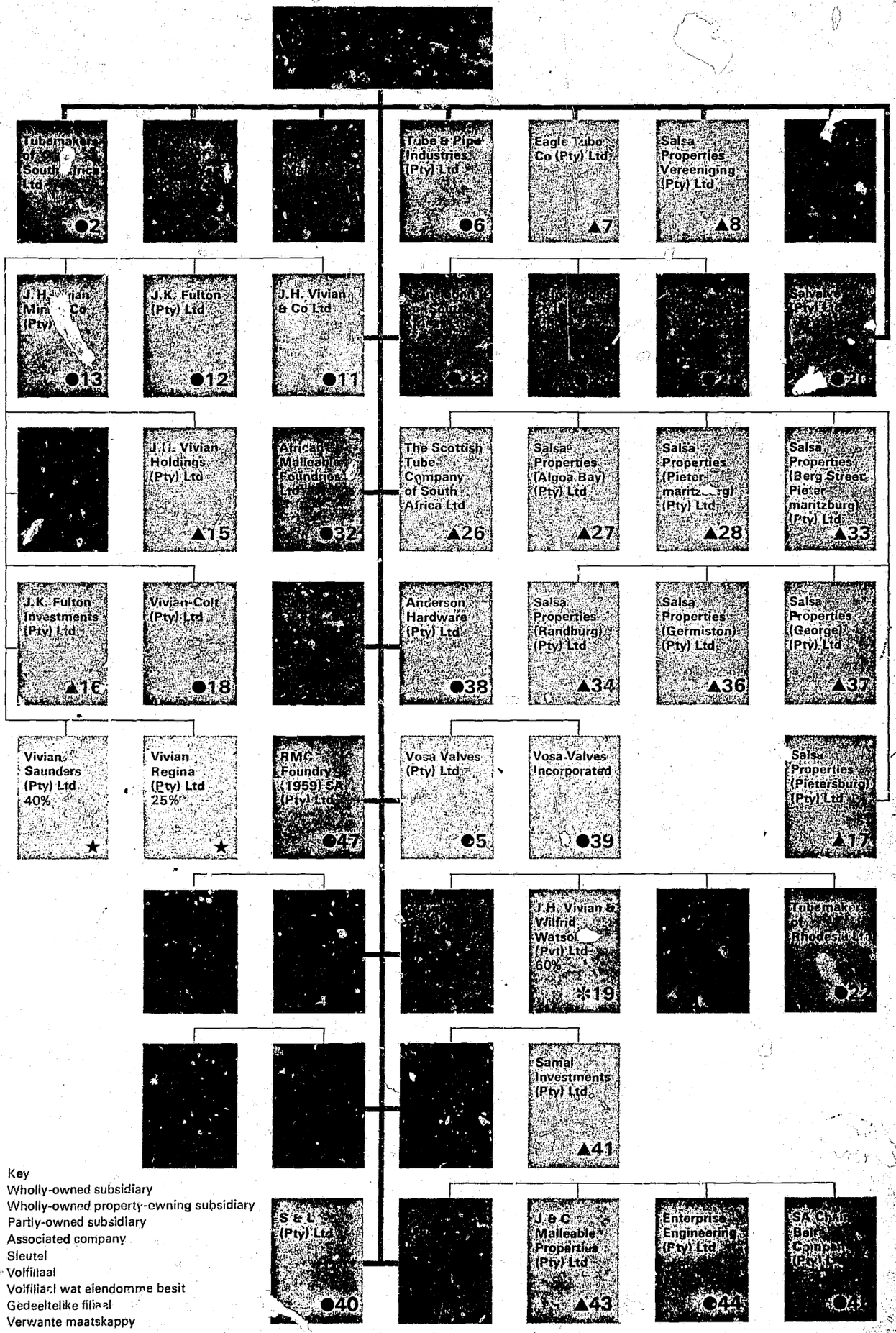

Divisional Marketing Manager Afdelings-bemarkings-bestuurder R. E. Corcoran
Divisional Accountant Afdelings-rekenmeester P. L. S. Bell
Divisional Personnel Manager Afdelingspersoneel-bestuurder H. R. Russell
Eastern Region Oostelike Streek
Western Region Westelike Streek
Regional Accountant Streeks-rekenmeester
Regional Personnel Manager Streeks-personeelbestuurder
General Manager Hoofbestuurder D. G. Mun-Gavin
General Manager Hoofbestuurder D. R. Hattingh
Regional Accountant Streeks-rekenmeester
Regional Personnel Manager Streeks-personeelbestuurder
Stewarts & Lloyds of South Africa Ltd Durban Pietermaritzburg East London Queenstown Dundee Newcastle
J. H. Vivian & Co Ltd Durban East London Pietermaritzburg
H. Incledon & Co (South Africa) Ltd Durban Pietermaritzburg Empangeni
Baldwins Ltd East London Durban Dundee Pietermaritzburg Newcastle
Stewarts & Lloyds of South Africa Ltd Cape Town Port Elizabeth Mossel Bay
Stewarts & Lloyds of South West Africa Ltd Windhoek Otjiwarongo Walvis Bay
J. H. Vivian & Co. Ltd Cape Town Port Elizabeth Windhoek
H. Incledon & Co (South Africa) Ltd Cape Town
Baldwins Ltd Port Elizabeth Cape Town
Anderson Hardware (Pty) Ltd Port Elizabeth

Share capitals Aandelekapitale

Company Maatskappy	Number of ordinary shares Aantal gewone aandele Authorised Gemagtig	 Issued and fully paid Uitgereik en volopbetaal	Value per share Waarde per aandeel	Number of preference shares Aantal voorkeuraandele Authorised Gemagtig	 Issued and fully paid Uitgereik en volopbetaal	Value per share Waarde per aandeel	Total issued capital R Totale uitgereikte kapitaal R
1	30 000 000	22 510 533	50c	300 000	300 000	R2	11 855 266
2	7 500 000	6 983 976	R1				6 983 976
3	100 000	80 000	R2				160 000
4	100 000	55 000	MK2				MK110 000
5	200 000	200 000	R2				400 000
6	200	200	R1				200
7	360 000	345 000	R2				690 000
8	1 000	1 000	R1				1 000
9	250 000	250 000	R1				250 000
10	1 000 000	865 100	R1				865 100
11	1 200 000	1 035 000	R1	400 000	300 000	R1	1 335 000
12	75 000	75 000	R2				150 000
13	10 000	10 000	R2				20 000
14	40 002	2	R1				2
15	1 000	1 000	R2	24 000	24 000	R2	50 000
16	100	2	R1				2
17	100	2	R2				4
18	22 500	22 500	R2				45 000
19	100 000	100 000	R$2				R$200 000
20	1 000	1 000	R1				1 000
21	4 000 000	3 800 000	R$,50c				R$1 900 000
22	240 000	4 000	R$,50c				R$2 000
23	1 250 000	1 125 000	R2				2 250 000
24	4 000	4 000	R$2				R$8 000
25	4 000	1 000	R1				1 000
26	300 000	240 000	R2				480 000
27	10 000	10 000	R2				20 000
28	1 000	1 000	R1				1 000
29	500 000	400 000	R2				800 000
30	5 000	100	R2				200
31	4 000 000	3 750 000	R1				3 750 000
32	500 000	450 000	R1				450 000
33	100	4	R1				4
34	1 000	1 000	R1				1 000
35	200 000	150 000	R2				300 000
36	1 000	1 000	R1				1 000
37	1 000	1 000	R1				1 000
38	24 000	24 000	R2	58 000	52 300	R2	152 600
39	1 000	1 000	US$1				US$1 000
40	100	100	R1				100
41	100	3	R2				6
42	200 000	200 000	R2				400 000
43	100	2	R2				4
44	4 000	4 000	R2				8 000
45	4 000	4	R1				4
46	64 000	60 002	R$,50c				R$30 001
47	1 000	1 000	R2				2 000
48	5 000	5 000	R1				5 000

Stewarts & Lloyds Group of Companies

Stewarts & Lloyds Maatskappyegroep


Tubemakers of South Africa Ltd ●2
Tube & Pipe Industries (Pty) Ltd ●6
Eagle Tube Co (Pty) Ltd ▲7
Salsa Properties Vereeniging (Pty) Ltd ▲8
J.H. Vivian Mining Co (Pty) ●13
J.K. Fulton (Pty) Ltd ●12
J.H. Vivian & Co Ltd ●11
Salva (Pty) Ltd ●16
J.H. Vivian Holdings (Pty) Ltd ▲15
African Malleable Foundries Ltd ●32
The Scottish Tube Company of South Africa Ltd ▲26
Salsa Properties (Algoa Bay) (Pty) Ltd ▲27
Salsa Properties (Pietermaritzburg) (Pty) Ltd ▲28
Salsa Properties (Berg Street, Pietermaritzburg) (Pty) Ltd ▲33
J.K. Fulton Investments (Pty) Ltd ▲16
Vivian-Colt (Pty) Ltd ●18
Anderson Hardware (Pty) Ltd ●38
Salsa Properties (Randburg) (Pty) Ltd ▲34
Salsa Properties (Germiston) (Pty) Ltd ▲36
Salsa Properties (George) (Pty) Ltd ▲37
Vivian Saunders (Pty) Ltd 40% ★
Vivian Regina (Pty) Ltd 25% ★
RMC Foundry (1959) SA (Pty) Ltd ●47
Vosa Valves (Pty) Ltd ●5
Vosa Valves Incorporated ●39
Salsa Properties (Pietersburg) (Pty) Ltd ▲17
J.H. Vivian & Wilfrid Watson (Pvt) Ltd 60% ✻19
Tubemakers of Rhodesia Ltd ●22
Samal Investments (Pty) Ltd ▲41
S & L (Pty) Ltd ●40
J & C Malleable Properties (Pty) Ltd ▲43
Enterprise Engineering (Pty) Ltd ●44
SA Chain Belt Company (Pty) Ltd ●45

Key
- ● Wholly-owned subsidiary
- ▲ Wholly-owned property-owning subsidiary
- ✻ Partly-owned subsidiary
- ★ Associated company

Sleutel
- ● Volfiliaal
- ▲ Volfiliaal wat eiendomme besit
- ✻ Gedeeltelike filiaal
- ★ Verwante maatskappy

Administration

Directors
H. C. Kuiper *Chairman*
T. M. King *Deputy Chairman and Group Managing Director*
W. G. Boustred
W. F. Spence
Prof. P. W. Hoek
J. M. Edwards *(British)*
J. A. Wood *(British)*
E. P. Gush
H. A. Godwin
H. R. Smith *(British)*

Alternate directors
M. E. Llowarch *(British)*
M. H. S. Webber *(British)*
L. Boyd *(British)*
C. E. Bryan
M. W. King

Group secretary
E. A. Johnson

Registered office
Corner Voortrekker Street and Rhodes Avenue
(P.O. Box: 74) Vereeniging
1930
Telephone: 22-2221

Group secretary's address
36 Simmonds Southway
Park Central, Johannesburg
(P.O. Box: 1189) Johannesburg
2000
Telephone: 836-1111

Transfer secretaries
Rand Registrars Limited
Devonshire House, Jorissen Street
Braamfontein, Johannesburg 2001

United Kingdom office
Kennedy Tower
St. Chads, Queensway
Birmingham B4 6JF

United Kingdom transfer secretaries
Charter Consolidated Limited
Charter House, Park Street
Ashford, Kent T24 8EQ

Bankers
The Standard Bank of South Africa Limited
Barclays National Bank Limited

Merchant bankers
Union Acceptances Limited

Auditors
Deloitte & Co.

Administrasie

Direkteure
H. C. Kuiper *Voorsitter*
T. M. King *Adjunk-Voorsitter en Besturende Direkteur van die Groep*
W. G. Boustred
W. F. Spence
Prof. P. W. Hoek
J. M. Edwards *(Brits)*
J. A. Wood *(Brits)*
E. P. Gush
H. A. Godwin
H. R. Smith *(Brits)*

Alternatiewe direkteure
M. E. Llowarch *(Brits)*
M. H. S. Webber *(Brits)*
L. Boyd *(Brits)*
C. E. Bryan
M. W. King

Groepsekretaris
E. A. Johnson

Geregistreerde kantoor
Hoek van Voortrekkerstraat en Rhodeslaan
(Posbus: 74) Vereeniging
1930
Telefoon: 22-2221

Groepsekretaris se adres
Simmonds-suidweg 36
Park Central, Johannesburg
(Posbus: 1189) Johannesburg
2000
Telefoon: 836-1111

Oordragsekretarisse
Rand Registrars Limited
Devonshire House, Jorissenstraat
Braamfontein, Johannesburg 2001

Verenigde Koninkrykkantoor
Kennedy Tower
St. Chads, Queensway
Birmingham B4 6JF

Verenigde Koninkryk Oordragsekretarisse
Charter Consolidated Limited
Charter House, Park Street
Ashford, Kent T24 8EQ

Bankiers
Die Standard Bank van Suid-Afrika Beperk
Barclays-Nasionale Bank Beperk

Aksepbank
Union Acceptances Beperk

Ouditeure
Deloitte & Kie

Corrugated flexible P.V.C. soil drainage pipe.
Geriffelde buigsame P.V.C.-riooldreineerpyp.

Report of the directors

Group review

The year ended September 1975 was significant for dangerous inflation rates, referred to later, and a slow down in real growth in the South African economy. The slow down was selective, affecting mainly the building, consumer durable and agricultural sectors.

However, demands from industry catering for development of the infrastructure remained strong and demand from the mining sector remained good until the last quarter of the year.

Sales for the year—R204 967 000—were 14,34% higher than for the previous year with pretax profit increasing by 19,96%—from R17 873 000 to R21 441 000. Earnings per share increased by 34% from 41 cents to 54,9 cents. The return on shareholders' funds after taxation was 21,21% compared with 17,63% for 1974.

In declaring a dividend of 17 cents per share compared with 13 cents per share for the previous year, your directors have recognised the need to preserve the purchasing power of dividends and to relate them to earnings, while being mindful also of the need to conserve assets, to provide for the funding of growth and to provide, in part, for the substantial capital expenditure planned for the next four years.

In pursuance of a consistent long term debt policy, loan funds were increased by the issue of 8 million debentures of R1 each in September 1975. At 30 September 1975 proceeds of the issue amounting to R4 623 000 had been received.

Once again we have pleasure in expressing our thanks to all employees for their contribution to the Group's results.

Inflation

Your directors feel that the effects of inflation on shareholders' investment must be highlighted.

Direkteursverslag

Groepoorsig

Die jaar geëindig September 1975 was wesenlik wat betref gevaarlike inflasiekoerse, waarna hieronder verwys word, en 'n vertraging in werklike groei in die Suid-Afrikaanse ekonomie. Die afplatting was selektief en het hoofsaaklik die bou- en landbousektore getref, asook die sektor wat duursame verbruiksartikels hanteer.

Aanvraag vanaf die nywerheid wat in die ontwikkeling van die infrastruktuur voorsien, het egter sterk gebly en aanvraag vanaf die mynsektor het goed gebly tot die laaste kwartaal van die jaar.

Afset vir die jaar – R204 967 000 – was 14,34% hoër as vir die vorige jaar met 'n vermeerdering in die wins voor belasting van 19,96%—vanaf R17 873 000 tot R21 441 000. Verdienste per aandeel het vermeerder met 34% van 41 sent tot 54,9 sent. Die opbrengs op aandeelhouersfondse na belasting was 21,21% vergeleke met 17,63% vir 1974.

Met die verklaring van 'n dividend van 17 sent per aandeel, vergeleke met 13 sent per aandeel vir die vorige jaar, het u direkteure besef dat dit noodsaaklik is om die koopkrag van dividende te behou en hulle in verband te bring met verdienste, terwyl hulle terselfdertyd in gedagte hou dat dit belangrik is om bates te behou ten einde voorsiening te maak vir die finansiering van groei en ook om gedeeltelik te voorsien vir die wesenlike kapitaaluitgawe wat vir die volgende vier jaar beoog word.

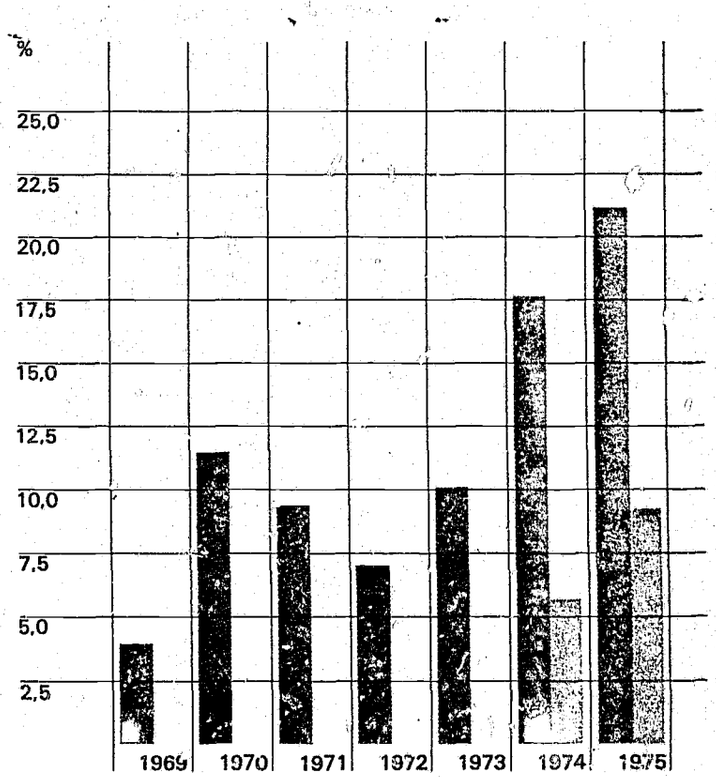
Ingevolge 'n konsekwente beleid t.o.v. langtermynskulde, is leningsfondse vermeerder deur die uitgifte van 8 miljoen skuldbriewe van R1 elk in September 1975. Op 30 September 1975 is opbrengs van die uitgifte ten bedrae van R4 623 000 ontvang. Weer eens het ons die genoeë om ons dank te betuig aan alle werknemers vir hulle bydrae tot die Groepresultate.

Inflasie

U direkteure is van mening dat die uitwerking van inflasie op u aandeelhouersbelegging beklemtoon moet word.

Monetary and real return on shareholders funds (%)

Monetêre en reële opbrengs op aandeelhouers fondse (%)



The effects of successive years of increasing inflation demand appropriate action to preserve the purchasing power of the capital invested in a company. There are no real profits unless an increase in purchasing power results from the activities of a business. Accordingly, profits arising from changes in the value of money must be measured and recorded. It is now accepted that during periods of inflation, accounts prepared on a conventional basis generally overstate profits and understate the value of assets and equity. As a consequence, return on investment and balance sheet ratios derived from 'historical cost' financial statements are misleading.
Debate continues on inflation accounting methods. The Group is conscious of the limitations of the Current Purchasing Power (C.P.P.) approach but, until concensus is reached, has decided to continue using C.P.P. accounting to quantify the effects of inflation.
The estimated effect of inflation on the Group's results is given on pages 50 to 52. The implications of the percentage of real profits paid in tax (53,86%) deserve serious consideration by Government.

Die uitwerking van opeenvolgende jare van vermeerderende inflasie verg toepaslike optrede om die koopkrag van die kapitaal wat in 'n Maatskappy belê is, te behou. Daar is geen eintlike winste nie, tensy die vermeerdering in koopkrag die gevolg is van die bedrywighede van 'n besigheid. Dienooreenkomstig moet winste wat voortspruit uit die veranderinge in die waarde van geld gemeet en getoon word. Daar word nou aanvaar dat rekeninge wat gedurende tydperke van inflasie op 'n konvensionele basis voorberei word, gewoonlik winste te hoog opgee en die waarde van bates en ekwiteit te laag opgee. Gevolglik is opbrengs op belegging en balansstaatverhoudings wat uit finansiële state volgens 'historiese koste'-metode bereken word, misleidend.
Besprekings omtrent inflasierekeningkundemetodes duur steeds voort. Die Groep is bewus van die beperkings van die Huidige Koopkrag-benadering (H.K.K.), maar, tot tyd en wyl eenstemmigheid bereik is, sal die Groep voortgaan met die gebruik van H.K.K.-rekeningkunde ten einde die uitwerking van inflasie te bepaal. Die beraamde uitwerking van inflasie op die Groepresultate word op bladsye 50 tot 52 uiteengesit. Die implikasies van die persentasie werklike winste wat in belasting betaal is, (53,86%) verdien ernstige oorweging deur die Regering.

Acquisitions and mergers
On 1 April 1975 an agreement was concluded to acquire the entire shareholding of RMC Foundry (1959) SA (Pty) Ltd with effect from 1 October 1974.

Verkrygings en Samesmeltings
Op 1 April 1975 is 'n ooreenkoms aangegaan om die totale aandelebesit van RMC Foundry (1959) SA (Pty) Ltd. te verkry, met ingang van 1 Oktober 1974.

Rationalisation
Since the end of the financial year, the operations of RMC Foundry (1959) SA (Pty) Ltd have been merged with those of African Malleable Foundries Ltd. The directors consider that the rationalisation of these operations will be of considerable benefit to the Group.

Rasionalisasie
Sedert die einde van die boekjaar, is die bedrywighede van RMC Foundry (1959) SA (Pty) Ltd. met dié van African Malleable Foundries Ltd. saamgesmelt. Die direkteure is van mening dat die rasionalisasie van hierdie bedrywighede die Groep aansienlik tot voordeel sal strek.

Personnel
Group manning at 30 September 1975 was 11 819, compared with 12 066 at 30 September 1974.
With the objective of increasing productivity, a formal 'Operations Improvement Programme' was implemented. Results were encouraging.
In-Group training for all categories of White and Black employees was maintained at a high level. The Group sponsored 14 employees for under-graduate and post-graduate study at South African and overseas universities.
The Group Bantu Training Centre was approved as a registered In-Service Training Centre. Intensive training at the Centre enabled exemptions to be obtained for the use of Black workers as welding operators and for other semi-skilled work.
A successful start was made in the training of Coloured engineering apprentices.
Senior executives, specialists and instructors from the Group gave considerable time and assistance to the establishment and running of a Government Bantu In-Service Training Centre at Sebokeng in the Vaal Triangle.
Improvements were made to pension schemes for all employees, and a Death Benefit Fund was introduced for Black employees. To alleviate the effects of inflation on pensioners, the Group continued to supplement their entitlements.

Personeel
Op 30 September 1975 was die aantal werknemers 11 819, vergeleke met 12 066 op September 1974.
Met die doel om algemene produktiwiteit te vermeerder, is 'n formele 'Bedrywigheidverbeteringsprogram' ingestel. Resultate was bemoedigend.
Opleiding binne die Groep vir werkers van alle kategorieë is op 'n hoë peil gehandhaaf. Hierbenewens is 14 werknemers deur die Groep ondersteun vir voorgraadse en nagraadse studies aan Suid-Afrikaanse en buitelandse universiteite. Die Groep se Bantoe-opleidingsentrum is as 'n geregistreerde indiensopleidingsentrum goedgekeur. Intensiewe opleiding by die sentrum het die verkryging van vrystellings moontlik gemaak t.o.v. die gebruik van swart werkers as sweiswerkers en vir ander halfgeskoolde arbeid.
'n Suksesvolle aanvang is gemaak met die opleiding van Kleurlingingenieursvakleerlinge.
Senior uitvoerende beamptes, spesialiste en instrukteurs van die Groep het heelwat tyd en hulp bestee aan die stigting en bestuur van 'n Bantoe-indiensopleidingsentrum van die Staat by Sebokeng in die Vaaldriehoek.
'n Pensioenskema vir alle werknemers is verbeter en 'n Sterftevoordeelfonds is vir Swart werknemers ingestel.
Ten einde die uitwerking van inflasie op pensioentrekkers te verlig, het die Groep hulle geregtighede aangevul.

The future
The present economic climate makes forecasting hazardous. Action to reduce inflation conflicts with

Die toekoms
As gevolg van die huidige ekonomiese toestande is voorspelling onseker. Optrede om inflasie te verminder, is

measures aimed at stimulating the economy. As a result, South Africa, in common with other major countries, is facing a period of confusion. It is doubtful whether any improvement in business will occur before the middle of 1976. The next trading year will be difficult and management will find itself facing many challenges.
The management philosophy of the Group is to identify clearly the work to be done and the problems to be solved; to structure the Group in a way that will foster good internal and external communications and establish the working relationships necessary for the achievement of objectives; and to have an enthusiastic and highly competent management team leading with verve and controlling with discipline the activities of the Group.
With management and staff committed to this philosophy we believe the Group can meet with confidence the challenges that lie ahead.
The 'Manifesto for a Collective Campaign against Inflation' and its implications, are expected to depress gross margins and to lower profit performance in the short term. This concerted action to contain and reduce inflation is fully endorsed by the Group.
In the circumstances, it would be unwise to predict significant increases in sales and profit for the coming year. Long term prospects remain good and the Group is preparing to meet the increased demands which will inevitably arise in a country with South Africa's resources and potential.

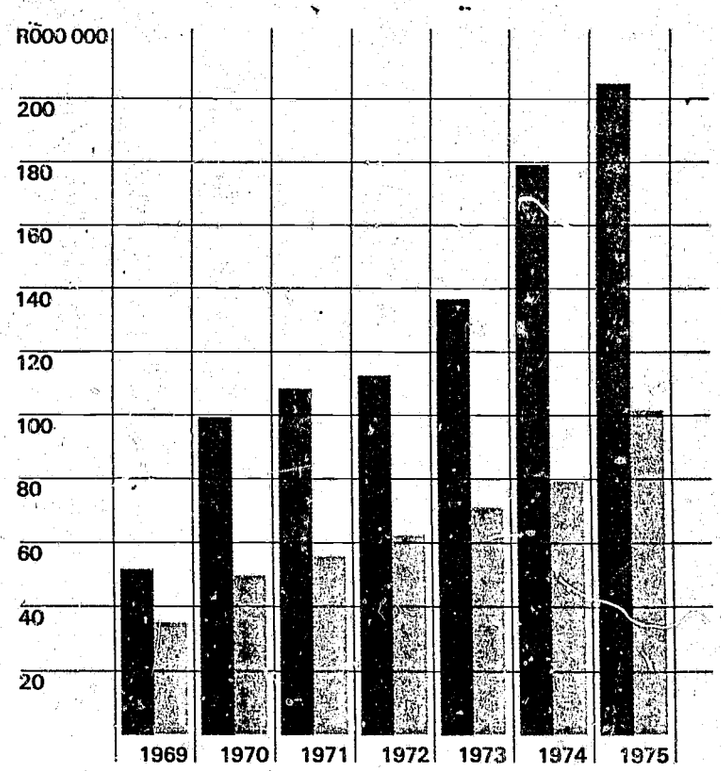
teenstrydig met maatreëls wat die stimulering van die ekonomie nastreef. Gevolglik ervaar Suid-Afrika, net soos ander belangrike lande, 'n tydperk van verwarring. Dit is twyfelagtig of enige verbetering in besigheid voor die middel van 1976 sal plaasvind. Die volgende bedryfsjaar sal moeilik wees en die bestuur sal te staan kom voor baie uitdagings.
Die bestuursfilosofie van die Groep is om die werk wat gedoen moet word en die probleme wat opgelos moet word, duidelik vas te stel; om die Groep saam te stel op 'n wyse wat goeie interne en eksterne betrekkinge sal bevorder en goeie werksbetrekkinge tot stand sal bring wat noodsaaklik is om doelstellinge te verwesenlik; en om 'n geesdriftige en hoogs bekwame bestuurspan te hê wat die leiding met geesdrif neem en die bedrywighede van die Groep met dissipline beheer. Met bestuur en personeel aan hierdie filosofie gebonde, glo ons dat die Groep die uitdagings wat voorlê, met vertroue die hoof kan bied.
Die 'Manifes vir 'n gesamentlike veldtog teen inflasie' en sy implikasies, sal na verwagting brutomarges verlaag en winsprestasie oor die korttermyn verminder. Hierdie gesamentlike optrede om inflasie in toom te hou en te verminder, word ten volle deur die Groep ondersteun.
In die omstandighede sou dit nie raadsaam wees om wesenlike vermeerderings in afset en winste vir die komende jaar te voorspel nie. Langtermynvooruitsigte is steeds goed en die Groep berei hom voor om aan die vermeerderde aanvraag te voldoen, wat noodwendig sal ontstaan in 'n land met die hulpbronne en potensiaal van Suid-Afrika.

Holding company
The company is a subsidiary of International Pipe and Steel Investments South Africa (Pty) Limited (IPSA). Its business comprises the manufacture and distribution of welded and seamless steel tube, rectangular hollow steel sections, pipe fittings and joints, copper and plastic tubes, centrifugal pumps, valves, diesel engines, irrigation equipment and malleable and grey iron castings.

Houermaatskappy
Die maatskappy is 'n filiaal van International Pipe and Steel Investments South Africa (Pty) Limited (IPSA). Sy sakebedrywighede bestaan uit die vervaardiging en verspreiding van sweis- en naatlose staalpyp, reghoekige holstaalseksies, pyptoebehore en -lasse, koper- en plastiekpype, sentrifugale pompe, kleppe, dieselenjins, besproeiingstoerusting en gietstukke van smeebare- en grysyster.

Sales generation from assets employed

Verkoopsontwikkeling a.g.v. gebruikte bates



	1975	1974	
	R000	R000	
The income for the Group after taxation for the year to 30 September amounted to	12 398	9 269	Die inkomste vir die Groep ná belasting vir die jaar tot 30 September was
Less: Retained by subsidiary companies	5 861	4 501	*Min:* Teruggehou deur filiaalmaatskappye
The net income after taxation applicable to the holding company is	6 537	4 768	Die netto inkomste ná belasting toeskryfbaar aan die houermaatskappy is
Capital surplus on disposal of Land and buildings	88	46	Kapitale oorskot met verkoop van Grond en geboue
	6 625	4 814	
To this balance is added the retained income at the beginning of the year	4 348	2 542	By die saldo moet gevoeg word die teruggehoue inkomste aan begin van jaar
	10 973	7 356	
A capital surplus arising on the disposal of non-trading assets was transferred to non-distributable reserve	88	46	'n Kapitaaloorskot voortspruitend uit die verkoop van nie-handelsbates is na nie-verdeelbare reserwe oorgedra
	10 885	7 310	
Out of this dividends have been paid on the 6% first cumulative preference shares for the period up to 30 June 1975 and provision has been made for the dividend accrued for the three months to 30 September 1975 amounting to	36	36	Hieruit is dividende betaal op die 6% eerste kumulatiewe voorkeuraandele vir die tydperk tot 30 Junie 1975 en voorsiening is gemaak vir die dividend opgeloop vir die drie maande tot 30 September 1975 ten bedrae van
	10 849	7 274	
Out of the balance your directors have declared a dividend of 17 cents (1974: 13 cents) per share for the period ending 30 September 1975	3 827	2 926	Uit die saldo het u direkteure 'n dividend van 17 sent (1974: 13 sent) per aandeel verklaar vir die tydperk geëindig 30 September 1975
Leaving retained income to be carried forward to the next year of	7 022	4 348	Wat 'n teruggehoue inkomste laat om oorgedra te word na aanstaande jaar

Capital
The authorised and issued share capital remains the same as at 30 September 1974.

Kapitaal
Die gemagtigde en uitgereikte aandelekapitaal bly onveranderd soos op 30 September 1974.

Debentures
An unsecured debenture issue of R8 million was privately placed in September 1975 and taken up as follows:
5 395 000 Series A 13,375% per annum 1987/1996.
2 605 000 Series B 13,125% per annum 1981/1985.
Those debentures which were fully paid on application were listed on the Johannesburg Stock Exchange on 20 October 1975.
The 11,75% per annum Series A and variable rate Series B Unsecured Debentures 1986/1995 became fully paid on 30 September 1975, and a listing on the Johannesburg Stock Exchange was granted on 6 October 1975.

Skuldbriewe
In September 1975 is 'n onversekerde obligasie-uitgifte van R8 miljoen privaat geplaas en is soos volg opgeneem:
5 395 000 Reeks A 13,375% per jaar 1987/1996.
2 605 000 Reeks B 13,125% per jaar 1981/1985.
Daardie skuldbriewe wat, met aansoek, volopbetaal is, is op 20 Oktober 1975 op die Johannesburgse Effektebeurs genoteer.
Reeks A teen 11,75% per jaar en Reeks B Onversekerde Skuldbriewe teen wisselende koers is op 30 September 1975 volopbetaal, en notering op die Johannesburgse Effektebeurs is op 6 Oktober 1975 toegeken.

Capital Expenditure
The expenditure on fixed assets for the Group amounted to R3 481 000 (1974: R5 254 000).

The major items of expenditure were:

	R
Land and buildings	36 000
Buildings – Incledon	62 000
Steel Store – Baldwins, Que Que	34 000
Buildings at Windhoek	62 000
Steel Service Centre, Brakpan	64 000
Slitting Line – Tosa	1 250 000
Buildings – Salweir	30 000
Factory and Offices – Pipe Couplings	182 000
Air Compressor – A.M.F.	42 000
Pressure Testers – A.M.F.	27 000
Tapping Machines – Tosa	121 000

Kapitaaluitgawe
Die uitgawes op vaste bates vir die Groep het R3 481 000 (1974: R5 254 000) beloop.

Die belangrikste uitgawe-items was:

	R
Grond en geboue	36 000
Geboue – Incledon	62 000
Staalmagasyn – Baldwins, Que Que	34 000
Geboue by Windhoek	62 000
Staaldienssentrum – Brakpan	64 000
Splitslyn – Tosa	1 250 000
Geboue – Salweir	30 000
Fabriek en kantore – Pipe Couplings	182 000
Lugkompressor – A.M.F.	42 000
Druktoetsers – A.M.F.	27 000
Moerdraadmasjiene – Tosa	121 000

Surface Grinder – Tosa	62 000	Vlakslyper–Tosa	62 000
Lathes – Tosa	34 000	Draaibanke–Tosa	34 000
Flange Machines – Tosa	56 000	Flensmasjiene–Tosa	56 000
Ablution Facilities – Tosa	30 000	Wasfasiliteite–Tosa	30 000
Factory Additions – Bundy Tubing	162 000	Fabrieksbyvoegings–Bundy Tubing	162 000
Zinc Coating Plant – Bundy Tubing	166 000	Galvaniseerinstallasie–Bundy Tubing	166 000
Bull Blocks – Maksal	165 000	Trektrommels–Maksal	165 000
Book value of fixed assets in R.M.C. Foundry (1959) S.A. (Pty) Limited at date of acquisition	43 000	Boekwaarde van vaste bates in R.M.C. Foundry (1959) S.A. (Pty) Limited op verkrygingsdatum	43 000
The book value of fixed assets disposed of during the year was R300 000 (1974: R182 000). The major items were:		Die boekwaarde van vaste bates wat gedurende die jaar van die hand gesit is, is R300 000 (1974: R182 000). Die hoofitems was:	
Land and buildings	76 000	Grond en geboue	76 000
Land and buildings – Vivians	23 000	Grond en geboue–Vivians	23 000
Land and buildings – Scottish Tube	25 000	Grond en geboue–Scottish Tube	25 000

Sales and net income by divisions

The proportions of Group sales and net income before tax attributable to the various classes of business were:

Afset en netto inkomste uit afdelings

Die gedeeltes van Groepsafset en netto inkomste voor belasting toeskryfbaar aan die verskillende klasse van besigheid was:

	1975		1974		1973		1972		
	Sales / Verkope	Pre-tax income / Wins voor belasting	Sales / Verkope	Pre-tax income / Wins voor belasting	Sales / Verkope	Pre-tax income / Wins voor belasting	Sales / Verkope	Pre-tax income / Wins voor belasting	
	R000	R000	R000	R000	R000	R000	R000	R000	
Trading division	117 274	8 120	110 561	6 472	93 288	5 391	80 243	3 272	Handelsafdeling
Tubes division	58 233	10 191	50 387	9 831	32 412	2 398	24 000	1 915	Buise-afdeling
Manufactured products division	10 593	1 050	7 620	330	5 744	612	3 122	246	Afdeling vervaardigde produkte
Foundry division	18 867	1 410	10 697	1 038	5 504	1 060	4 665	358	Gieteryafdeling
Property owning companies		670		202		145		102	Eiendomsmaatskappye
Totals	204 967	21 441	179 265	17 873	136 948	9 606	112 030	5 893	Totale

Analysis of expenditure / **Ontleding van uitgawes**

	1975		1974		
	R000	%	R000	%	
Raw materials, manufactured goods, fuel and power	116 592	56,74	105 303	58,67	Grondstowwe, vervaardigde goedere, brandstof en krag
Wages, salaries and fringe benefits	41 702	20,29	33 193	18,50	Lone, salarisse en byvoordele
Distribution and general expenses	19 681	9,58	17 085	9,52	Verspreidings- en algemene uitgawes
Delivery charges	2 355	1,15	2 533	1,41	Afleweringskoste
Interest on borrowings	1 353	0,66	1 420	0,79	Rente op lenings
Depreciation	2 186	1,06	2 013	1,12	Waardevermindering
Taxation on income for the year	8 524	4,15	7 765	4,33	Belasting op inkomste vir die jaar
Shareholders' ordinary dividends	3 827	1,86	2 926	1,63	Aandeelhouers se gewone dividende
Shareholders' preference dividends	36	0,02	36	0,02	Aandeelhouers se voorkeurdividende
Dividends paid to outside shareholders ex subsidiary companies	288	0,14	353	0,20	Dividende betaal aan buite-aandeelhouers van filiaalmaatskappye
Income retained to finance purchase of fixed assets and increased working capital	8 932	4,35	6 843	3,81	Inkomste teruggehou om aankoop van vaste bates en verhoogde bedryfskapitaal te finansier
Receipts from sale of products, non-trading assets and other sources	205 476	100,00	179 470	100,00	Ontvangste uit verkoop van produkte, nie-handelsbates en ander bronne

Dividends

On 4 December 1975 your directors declared an ordinary dividend for the year ended 30 September 1975 of 17 cents (1974: 13 cents) per ordinary share on 22 510 533 shares. Dividend warrants will be posted to registered shareholders on or about 5 January 1976.
The preference dividend on the 6% preference shares amounts to R36 000 (1974: R36 000). Preference dividends are paid in equal instalments at the end of June and December.

Dividende

Op 4 Desember 1975 het u direkteure 'n gewone dividend vir die jaar geëindig 30 September 1975 verklaar van 17 sent (1974: 13 sent) per gewone aandeel op 22 510 533 aandele. Dividendbewyse sal op of teen 5 Januarie 1976 aan geregistreerde aandeelhouers gepos word.
Die voorkeurdividend op die 6% voorkeuraandele bedra R36 000 (1974: R36 000). Voorkeurdividende word einde Junie en Desember in gelyke paaiemente betaal.

Subsidiary companies

Statutory financial information in respect of subsidiary companies in the Group is set out on pages 46 and 47 of this report.

A breakdown of sales and profits by major operating divisions is shown on page 14. The activities of subsidiary companies and departments are given on pages 21 to 33. Directorate changes and resolutions passed at general meetings of members of subsidiary companies are detailed hereunder.

African Malleable Foundries Ltd

On 17 January 1975 Mr. P. F. Joubert resigned as a director and Messrs. R. R. Johnson, P. H. Levick, C. Pauls and H. R. Smith were elected to the board.

Anderson Hardware (Pty) Ltd

On 12 February 1975 Mr. B. C. Warner resigned as a director and Mr. I. C. Rauch was appointed in his stead. A special resolution adopting new articles of association was passed by the shareholders on 2 September 1975.

Baldwins Limited

Mr. B. C. Warner did not seek re-election at the annual general meeting of 12 February 1975. On 14 July 1975 Mr. C. A. Embleton was appointed a director.

H. Incledon & Co. (SA) Ltd

On 12 February 1975 Mr. B. C. Warner, who retired from executive duties on 31 December 1974, resigned as a director.

J. K. Fulton (Pty) Ltd.

The following resignations from the board were recorded:

Mr. G. A. Curry on 31 January 1975 and Mr. N. A. Hill on 18 March 1975.

Mr. R. C. Pestell was elected a director on 1 March 1975.

At a general meeting on 15 July 1975 a special resolution was passed changing the name of the company from J. K. Fulton & Co (Pty) Ltd.

Filiaalmaatskappye

Statutêre finansiële inligting t.o.v. filiaalmaatskappye in die Groep word op bladsye 48 en 49 van hierdie verslag uiteengesit.

'n Ontleding van afset en winste deur hoofbedryfsafdelings word op bladsy 14 getoon. Die bedrywighede van filiaalmaatskappye en afdelings word op bladsye 21 tot 33 uiteengesit.

Veranderinge in die raad en besluite by algemene vergaderings van lede van filiaalmaatskappye geneem, word hierondor gedetailleer.

African Malleable Foundries Ltd

Op 17 Januarie 1975 het mnr. P. F. Joubert as direkteur bedank en op dieselfde datum is mnre. R. R. Johnson, P. H. Levick, C. Pauls en H. R. Smith tot die raad gekies.

Anderson Hardware (Pty) Ltd

Op 12 Februarie 1975 het mnr. B. C. Warner as direkteur bedank en op dieselfde datum is mnr. I. C. Rauch in sy plek aangestel. 'n Spesiale besluit ter aanvaarding van die nuwe Statute van Oprigting is op 2 September 1975 deur die aandeelhouers geneem.

Baldwins Limited

Mnr. B. C. Warner het homself nie herkiesbaar gestel nie by die algemene jaarvergadering wat op 12 Februarie 1975 gehou is. Op 14 Januarie 1975 is mnr. C. A. Embleton as direkteur aangestel.

H. Incledon & Co (SA) Ltd

Op 12 Februarie 1975 het mnr. B. C. Warner, wat op 31 Desember 1974 uit bestuursdienste afgetree het, as direkteur bedank.

J. K. Fulton (Pty) Ltd

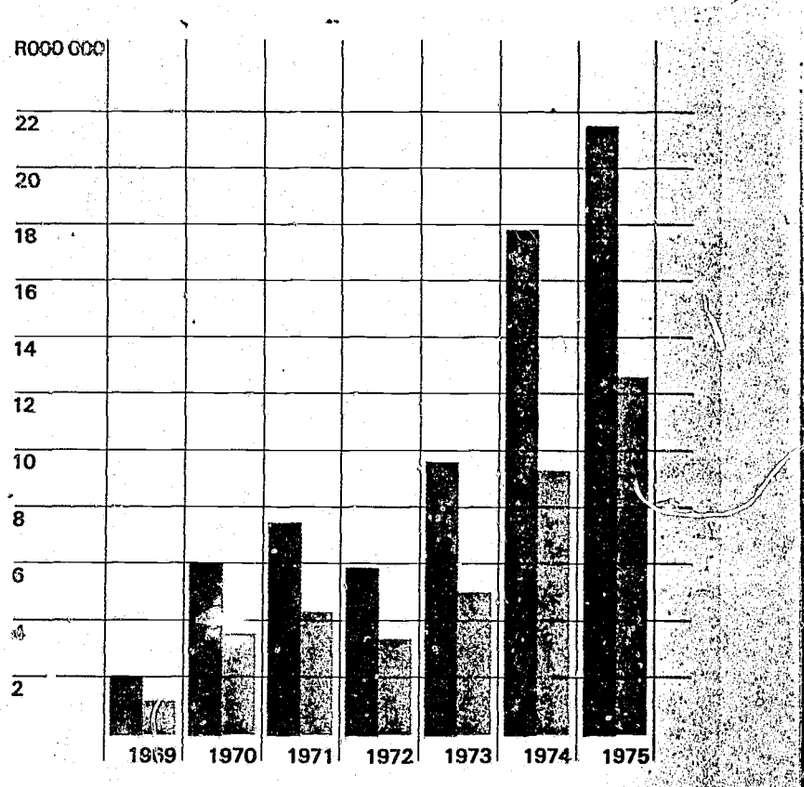
Die volgende bedankings uit die raad is gedurende die jaar geboekstaaf:

Mnr. G. A. Curry op 31 Januarie 1975 en mnr. N. A. Hill op 18 Maart 1975.

Mnr. R. C. Pestell is op 1 Maart 1975 as direkteur gekies.

Trading income before and after taxation

Handelsinkomste voor en na aftrekking van belasting



J. K. Fulton Investments (Pty) Ltd
On 12 February 1975 Messrs. P. L. S. Bell, G. J. McC. Kirk and A. Pollock resigned as directors and Messrs. T. M. King and E. A. Johnson were elected to the board.

J & C Malleable (Pty) Ltd
Messrs. R. R. Johnson, P. H. Levick and H. R. Smith were elected to the board on 17 January 1975.
Mr. P. F. Joubert resigned as a director on 21 February 1975.

Maksal Tubes (Pty) Ltd
The following directors were elected:
Messrs. N. G. Short on 27 November 1974, J. C. Brown and S. J. Coman on 26 March 1975.
Mr. S. J. Coman was appointed managing director on 1 July 1975.
On 25 September 1975 Mr. B. I. Harris, who retired on superannuation earlier this year, resigned from the board. He served the Group in various capacities for over 40 years. Mr. R. F. S. Young did not seek re-election at the annual general meeting held on 25 September 1975.

Plasal (Pty) Ltd
On 1 August 1975 the company passed a special resolution changing its name from Hydraulic Mine Roof Supports (Pty) Ltd.
Mr. G. A. Curry resigned as a director on 31 January 1975.
The shareholders adopted a new memorandum of association by special resolution on 23 September 1975.

RMC Foundry (1959) SA (Pty) Ltd
The entire share capital of the company was acquired on 1 April 1975.
The board was re-constituted as follows:
Messrs. H. A. Godwin (chairman), T. M. King, T. H. Lambert. The secretary is Mr. E. A. Johnson.
On 6 August 1975 Mr. P. H. Levick was elected a director.
To rationalise the malleable foundry operations of the Group it was decided that this operation should be transferred to African Malleable Foundries Ltd (AMF), and at a general meeting of shareholders on 28 October 1975 the sale of the company's assets to AMF, with effect from 1 November 1975, was confirmed.

S & L (Pty) Ltd
Mr. B. C. Warner resigned as a director on 12 February 1975. On 3 October 1975 the shareholders in general meeting passed a resolution changing the company's name from Salsa (Pty) Ltd.

Salvalve (Pty) Ltd
The company was incorporated on 25 July 1975 as Stewlloyd Valve Sales (Pty) Ltd. At a general meeting of shareholders held on 13 August 1975 a special resolution was passed changing the company's name.
The board is constituted as follows:
Messrs. T. M. King (chairman), I. C. Rauch and P. H. Levick. Mr. E. A. Johnson is secretary of the company.

Salweir (Pty) Ltd
Messrs. J. W. Attwell, G. A. Curry and A. Pollock resigned from the board at the end of January 1975 and Messrs. J. R. Spence, H. R. Smith and R. R. Johnson were appointed directors.

Lister air-cooled diesel engine.
Lugverkoelde Lister-dieselenjin.

By 'n algemene vergadering op 15 Julie 1975 is 'n spesiale besluit geneem om die naam van die maatskappy van J. K. Fulton & Co (Pty) Ltd te verander.

J. K. Fulton Investments (Pty) Ltd
Op 12 Februarie 1975 het mnre. P. L. S. Bell, G. J. McC. Kirk en A. Pollock as direkteure bedank, en mnre. T. M. King en E. A. Johnson is tot die Raad gekies.

J & C Malleable (Pty) Ltd
Mnre. R. R. Johnson, P. H. Levick en [illegible] Smith is op 17 Januarie 1975 tot die raad gekies.
Mnr. P. F. Joubert het op 21 Februarie 1975 as direkteur bedank.

Maksal Tubes (Pty) Ltd
Die volgende direkteure is gedurende die jaar gekies:
Mnre. H. G. Short op 27 November 1974, J. C. Brown en S. J. Coman op 26 Maart 1975.
Mnr. S. J. Coman is op 1 Julie 1975 as besturende direkteur aangestel. Op 25 September 1975 het mnr. B. I. Harris, wat vroeër vanjaar met pensioen afgetree het, uit die raad bedank. Hy het die Groep oor die 40 jaar in verskeie hoedanighede gedien.

Mnr. R. F. S. Young het homself nie herkiesbaar gestel nie by die algemene jaarvergadering wat op 25 September 1975 gehou is.

Plasal (Pty) Ltd
Op 1 Augustus het die maatskappy 'n spesiale besluit geneem om sy naam te verander van Hydraulic Mine Roof Supports (Pty) Ltd. Mnr. G. A. Curry het op 31 Januarie 1975 as direkteur bedank. Die aandeelhouers het deur 'n spesiale besluit op 23 September 1975 'n nuwe akte van oprigting aanvaar.

RMC Foundry (1959) SA (Pty) Ltd
Die totale aandelekapitaal van die maatskappy is op 1 April 1975 verkry.
Die raad is soos volg saamgestel:
Mnre. H. A. D. Godwin (voorsitter), T. M. King, T. H. Lambert. Die sekretaris is mnr. E. A. Johnson.
Op 6 Augustus 1975 is mnr. P. H. Levick as direkteur gekies. Ten einde die bedrywighede van die smeebare-yster-gieterye te rasionaliseer, is daar besluit om hierdie onderneming na African Malleable Foundries Ltd (AMF) oor te plaas, en by 'n algemene vergadering van aandeelhouers op 28 Oktober 1975 gehou, is die verkoop van die maatskappy se bates aan AMF, met ingang van 1 November, bevestig.

S & L (Pty) Ltd
Mnr. B. C. Warner het op 12 Februarie 1975 as direkteur bedank. Op 3 Oktober 1975 het aandeelhouers by 'n algemene vergadering 'n besluit geneem om die maatskappy se naam van Salsa (Pty) Ltd te verander.

Salvalve (Pty) Ltd
Die maatskappy is op 25 Julie 1975 as Stewlloyd Valve Sales (Pty) Ltd, ingelyf. By 'n algemene vergadering van aandeelhouers wat op 13 Augustus 1975 gehou is, is 'n spesiale besluit geneem om die naam van die maatskappy te verander. Die raad is soos volg saamgestel:
Mnre. T. M. King (voorsitter), I. C. Rauch en P. H. Levick.
Mnr. E. A. Johnson is sekretaris van die maatskappy.

Salweir (Pty) Ltd
Mnre. J. W. Atwell, G. A. Curry en A. Pollock het einde Januarie 1975 uit die raad bedank en mnre. J. R. Spence, H. R. Smith en R. R. Johnson is as direkteure aangestel.
By 'n algemene vergadering op 21 Julie 1975 gehou, is

At a general meeting held on 21 July 1975 the company's name was changed from Salsa Weir (Pty) Ltd. The change of name was registered on 16 September 1975.

Stewarts & Lloyds (Malawi) Ltd
On 31 January 1975 Mr. P. Munton Jackson was elected chairman of the board. Mr. K. Gilday was appointed a director on 17 March 1975 in place of Mr. R. G. Röhrs, who resigned on the same date. Mr. E. R. Fourie was nominated as an alternate to Mr Gilday, on 17 March 1975.
Mr. W. R. D. Hobbs resigned as a director on 9 October 1975 and Mr. P. E. L. Ellis was appointed to the board in his stead.

Stewarts & Lloyds of South West Africa Ltd
On 12 February 1975, Messrs. A. F. Robertson, E. J. Turner and B. C. Warner resigned as directors. No directors were elected in their stead.

The Scottish Tube Co of SA Ltd and
Salsa Property Companies
Mr. B. C. Warner did not seek re-election to the boards of the above companies at their annual general meetings held on 12 February 1975.

Tube & Pipe Industries (Pty) Ltd
Mr. B. C. Warner resigned from the board on 12 February 1975.

Tubemakers of SA Ltd
At the annual general meeting held on 12 February 1975, Mr. B. C. Warner, who had retired from executive duties in December 1974, did not seek re-election.

J. H. Vivian & Co Ltd
Mr. G. A. Curry, who joined the board in 1947, resigned on 31 January 1975. Mr. Curry retired as managing director in 1972. On 12 February 1975 Mr. A. Pollock resigned as a director. He joined the board in 1961.

die naam van die maatskappy verander van Salsa Weir (Pty) Ltd. Die naamverandering is op 16 September 1975 geregistreer.

Stewarts & Lloyds (Malawi) Ltd
Op 31 Januarie 1975 is mnr. P. Munton Jackson tot voorsitter van die raad gekies. Mnr. K. Gilday is op 17 Maart 1975 as direkteur aangestel in die plek van mnr. R. G. Röhrs, wat op dieselfde datum bedank het. Mnr. E. R. Fourie is op 17 Maart 1975 as plaasvervanger tot mnr. Gilday genomineer. Mnr. W. R. D. Hobbs het op 9 Oktober 1975 as direkteur bedank en mnr. P. E. L. Ellis is in sy plek tot die raad aangestel.

Stewarts & Lloyds of South West Africa Ltd
Op 12 Februarie 1975 het mnre. A. F. Robertson, E. J. Turner en B. C. Warner as direkteure bedank. Geen direkteure is in hul plek gekies nie.

The Scottish Tube Co of SA Ltd en
Salsa Property Companies
Mnr. B. C. Warner het homself nie herkiesbaar gestel tot die rade van die bostaande maatskappye nie, by hulle algemene jaarvergaderings wat op 12 Februarie 1975 gehou is.

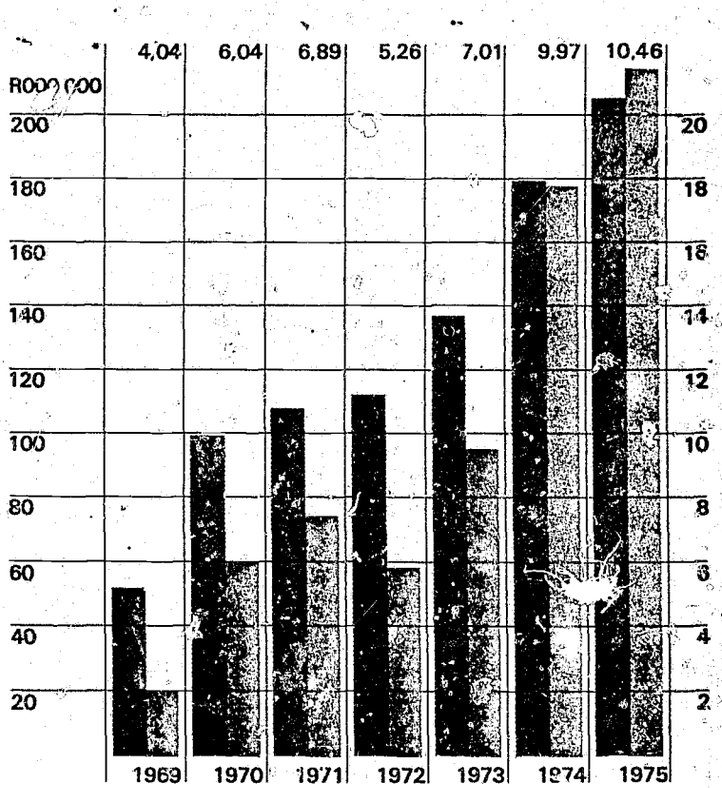
Tube & Pipe Industries (Pty) Ltd
Mnr. B. C. Warner het op 12 Februarie 1975 uit die raad bedank.

Tubemakers of S.A. Ltd
By die algemene vergadering wat op 12 Februarie 1975 gehou is, het mnr. B. C. Warner wat in Desember 1974 uit bestuursdienste afgetree het, homself nie herkiesbaar gestel nie.

J. H. Vivian & Co Ltd
Mnr. G. A. Curry wat in 1947 by die raad aangesluit het.

Sales retained as income before taxation

Verkope behou as inkomste voor aftrekking van belasting



*Ratio
*Verhouding

Sales (left scale)
Verkope (linker skaal)

Income (right scale)
Inkomste (regter skaal)

J. H. Vivian Holdings (Pty) Ltd
On 12 February 1975 Messrs. G. J. McC. Kirk and A. Pollock resigned as directors and Messrs. T. M. King and E. A. Johnson were elected to the board.

J. H. Vivian Mining Co (Pty) Ltd
Mr. G. A. Curry resigned from the board on 31 January 1975. Mr. R. C. Pestell was appointed a director on 1 March 1975.

Vivian-Colt (Pty) Ltd
On 31 January 1975 Mr. G. A. Curry resigned from the board.

Vosa Valves (Pty) Ltd and
Vosa Valves Incorporated
Mr. R. D. Wilson resigned as a director on 17 January 1975 and Mr. J. Nash resigned on 28 February 1975.

Stewarts & Lloyds of Rhodesia Ltd
Mr. P. Munton Jackson was elected chairman of the board from 1 February 1975, in place of Mr. B. C. Warner, who retired from the board on the same date.
The following were elected to the board on 31 January 1975:
Messrs. R. Burningham, I. C. Rauch and D. E. Whelehan.
On the same date Mr. D. G. Nicholson resigned as a director.
The board accepted the nomination of Mr. E. R. Fourie as alternate to Mr. I. C. Rauch on 1 February 1975.
On 14 April 1975 Mr. H. R. Smith was elected as a director.

Baldwins (Rhodesia) (Pvt) Ltd
Mr. B. C. Warner resigned as a director with effect from 1 February 1975. Mr. P. Munton Jackson was elected chairman of the board with effect from the same date.

H. Incledon & Co (Central Africa) Ltd
Mr. M. Gill was elected chairman of the board of directors on 31 January 1975.

Tubemakers of Rhodesia Ltd
With effect from 1 February 1975, Mr. B. C. Warner resigned as a director and Mr. P. Munton Jackson was elected chairman of the board.

Rhodesian Pipe Co (Pvt) Ltd
In November 1974 the Group disposed of its 60% interest in the above company.

Special Resolutions
The following minor subsidiaries passed special resolutions amending their articles of association:

Company	Date of Special Resolution
Enterprise Engineering (Pty) Ltd	2.9.75
J & C Malleable Properties (Pty) Ltd	2.9.75
SA Chain Belt Co (Pty) Ltd	2.9.75
Salsa Properties (Pietersburg) (Pty) Ltd	5.9.75
Samal Investments (Pty) Ltd	2.9.75

Directors
On 31 January 1975 Mr. G. A. Curry resigned as a director. Although Mr. Curry joined the board only in 1969 he was elected to the board of J. H. Vivian & Co Ltd in 1947, a company which he served for over forty years. We are grateful for his contribution.

het op 31 Januarie 1975 uit die raad bedank. Mnr. Curry het in 1972 as besturende direkteur bedank. Op 12 Februarie 1975 het mnr. A. Pollock as direkteur bedank. Hy het in 1961 by die raad aangesluit.

J. H. Vivian Holdings (Pty) Ltd
Op 12 Februarie 1975 het mnre. G. J. McC. Kirk en A. Pollock as direkteure bedank en op dieselfde datum is mnre. T. M. King en E. A. Johnson tot die raad gekies.

J. H. Vivian Mining Co (Pty) Ltd
Mnr. G. A. Curry het op 31 Januarie 1975 uit die raad bedank. Mnr. R. C. Pestell is op 1 Maart 1975 as direkteur aangestel.

Vivian-Colt (Pty) Ltd
Op 31 Januarie 1975 het mnr. G. A. Curry uit die raad bedank.

Vosa Valves (Pty) Ltd en
Vosa Valves Incorporated
Mnr. R. D. Wilson het op 17 Januarie 1975 as direkteur bedank en mnr. J. Nash het op 28 Februarie 1975 bedank.

Stewarts & Lloyds of Rhodesia Ltd
Mnr. P. Munton Jackson is vanaf 1 Februarie 1975 tot voorsitter van die raad gekies in die plek van mnr. B. C. Warner wat op dieselfde datum uit die raad afgetree het. Die volgende is op 31 Januarie 1975 tot die raad gekies: Mnre. R. Burningham, I. C. Rauch en D. E. Whelehan. Op dieselfde datum het mnr. D. G. Nicholson as direkteur bedank. Die raad het op 1 Februarie 1975 die benoeming van mnr. E. R. Fourie as plaasvervanger tot mnr. I. C. Rauch goedgekeur. Op 14 April 1975 is mnr. H. R. Smith tot direkteur gekies.

Baldwins (Rhodesia) (Pvt) Ltd
Mnr. B. C. Warner het vanaf 1 Februarie 1975 as direkteur bedank. Mnr. P. Munton Jackson is vanaf dieselfde datum tot voorsitter van die raad gekies.

H. Incledon & Co (Central Africa) Ltd
Mnr. M. Gill is op 31 Januarie 1975 tot voorsitter van die direksie gekies.

Tubemakers of Rhodesia Ltd
Met ingang van 1 Februarie 1975 het mnr. B. C. Warner as direkteur bedank en mnr. P. Munton Jackson is tot voorsitter van die raad gekies.

Rhodesian Pipe Co (Pvt) Ltd
In November 1974 het die groep sy 60% belang in die bostaande maatskappy van die hand gesit.

Spesiale Besluite
Die volgende kleiner filiale het spesiale besluite geneem ter wysiging van hulle Statute van Oprigting:

Maatskappy	Datum van Spesiale Besluit
Enterprise Engineering (Pty) Ltd	2.9.75
J & C Malleable Properties (Pty) Ltd	2.9.75
SA Chain Belt Co (Pty) Ltd	2.9.75
Salsa Properties (Pietersburg) (Pty) Ltd	5.9.75
Samal Investments (Pty) Ltd	2.9.75

Direkteure
Op 31 Januarie 1975 het mnr. G. A. Curry as direkteur bedank. Alhoewel mnr. Curry eers in 1969 by die raad aangesluit het, is hy in 1947 tot die raad van J. H. Vivian & Co Ltd geskies, 'n maatskappy wat hy oor die veertig jaar gedien het. Ons is dankbaar vir sy bydrae.

As reported last year, Mr. B. C. Warner retired from executive duties on 31 December 1974 after serving the company with distinction for 36 years. He did not seek re-election to the board at the annual general meeting on 28 February 1975. His quiet wisdom and integrity made a great contribution to the company and we wish him well in his retirement.
On 28 February 1975, Mr. H. A. Godwin, general manager Foundry Division, and Mr. H. R. Smith, general manager Tosa, were appointed to the board.
Mr. W. L. Morrison, managing director until his retirement in 1968, resigned as a director on 30 June 1975. Mr. Morrison made an outstanding contribution to the Group, which he joined as an engineering graduate in 1929.
Mr. W. G. Boustred withdrew his nomination as alternate of Mr. G. Langton on 2 December 1974, and on the same date Mr. L. Boyd was appointed as his alternate on the board.
In terms of article 96 of the company's articles of association, Messrs. E. P. Gush, W. F. Spence, J. A. Wood and Prof. P. W. Hoek retire by rotation at the annual general meeting. They are eligible and available for re-election. Details regarding directors and the secretary are shown on page 8 of this report.

Soos verlede jaar vermeld, het mnr. B. C. Warner op 31 Desember 1974 uit bestuursdienste afgetree, nadat hy die maatskappy 36 jaar lank met onderskeiding gedien het. By die algemene jaarvergadering op 28 Februarie 1975 gehou, het hy homself nie herkiesbaar gestel nie. Met sy stille wysheid en eerbaarheid het hy 'n waardevolle bydrae tot die maatskappy gelewer en ons wens hom alle voorspoed toe met sy aftrede.
Op 28 Februarie 1975 is mnr. H. A. Godwin, algemene bestuurder van die Gieteryafdeling en mnr. H. R. Smith, algemene bestuurder van Tosa, tot die raad aangestel.
Mnr. W. L. Morrison, besturende direkteur tot sy aftrede met pensioen in 1968, het op 30 Junie 1975 as direkteur bedank. Mnr. Morrison het 'n uitmuntende bydrae gelewer tot die Groep waarby hy in 1929 as ingenieurs-gegradueerde aangesluit het.
Mnr. W. G. Boustred het op 2 Desember 1974 sy nominering van mnr. G. Langton (as plaasvervanger) teruggetrek, en op dieselfde datum is mnr. L. Boyd as sy plaasvervanger in die raad aangestel. Ingevolge statuut 96 van die maatskappy se Statute van Oprigting tree mnre. E. P. Gush, W. F. Spence, J. A. Wood en prof. P. W. Hoek volgens rotasie by die algemene jaarvergadering uit.
Hulle is en stel hulself herkiesbaar. Besonderhede met betrekking tot di ekteure en die sekretaris word op bladsy 8 van hierdie verslag uiteengesit.

Directors' interests

According to information available to the company after reasonable enquiry, the aggregate interests of the directors and of their families at 30 September 1975, and up to the date of this report, did not exceed 5 per cent of the share capital or voting control of the company. The beneficial and non-beneficial shareholdings of the directors were as follows:

	1975	1974
Beneficial	**6 900**	65 700
Non-beneficial	**6 000**	5 600

Direkteure se belange

Volgens inligting wat aan die maatskappy beskikbaar is na redelike navraag, het die totale belange van die direkteure en hulle families op 30 September 1975, en tot die datum van hierdie verslag, nie 5 persent van die aandele-kapitaal of stembeheer van die maatskappy oorskry nie. Die voordelige en nie-voordelige aandelebesit van die direkteure was soos volg:

	1975	1974
Voordelig	**6 900**	65 700
Nie-voordelig	**6 000**	5 600

Directors' fees

It will be necessary to approve the fees payable to directors for the year ended 30 September 1975. An amount of R42 000 (1974: R42 000) has been provided for in the accounts.
The foregoing report of the directors, together with the annual financial statements for the year ended 30 September 1975, were approved by the board of directors on 4 December 1975 and are signed on its behalf by:

Direkteursgelde

Dit sal nodig wees om die gelde aan direkteure betaalbaar vir die jaar geëindig 30 September 1975, goed te keur. 'n Bedrag van R42 000 (1974: R42 000) is hiervoor in die rekeninge voorsien.
Die voorgaande verslag van die direkteure, tesame met die finansiële jaarstate vir die jaar geëindig 30 September 1975, is op 4 Desember 1975 deur die direksie goedgekeur en is namens die raad onderteken deur:

H. C. Kuiper, *Chairman*
Voorsitter

T. M. King, *Deputy Chairman and Group Managing Director*
Adjunk-voorsitter en Besturende Direkteur van die Groep

E. A. Johnson, *Group Secretary*
Groepsekretaris

TRADING DIVISION

Divisional general manager: I. C. Rauch

The number in brackets after each company's name refers to the charts on page 6 and page 7 giving details of share capitals.

Distributors and stockists of goods produced by the Group's manufacturing elements, also of other locally produced and imported materials.
Its markets are the manufacturing, engineering, mining, building, agricultural and public sectors. Operations are divided into five regions, four in South Africa and South West Africa and one covering Rhodesia and Malawi. The companies trading in South Africa are Stewarts & Lloyds of S.A. Ltd, Stewarts & Lloyds of South West Africa Ltd, J. H. Vivian & Co Ltd, H. Incledon & Co (South Africa) Ltd, Baldwins Ltd, Baldwins (Alloy Steels) (Pty) Ltd, Anderson Hardware (Pty) Ltd, and Salvalve (Pty) Ltd. Those in the Rhodesian region are Stewarts & Lloyds of Rhodesia Ltd, J. H. Vivian & Wilfred Watson (Pty) Ltd, Baldwins Rhodesia (Pvt) Ltd, Stewarts & Lloyds (Malawi) Ltd, and H. Incledon (Central Africa) Ltd.

South African regions

Despite the less favourable trading conditions experienced during the year, the diversity of activities ensured sustained profitability.
The supply situation changed rapidly from one of acute shortages and long deliveries, to one where lead times contracted sharply and most material was freely available in a very competitive market. Quick action taken against the danger of excess investment in inventory, together with the implementation of a new inventory control system, helped to avoid the threat to cash flow and stocks at the year's end were reasonably balanced.
It is difficult to forecast the level of market demand for

HANDELSAFDELING

Algemene afdelingsbestuurder: I. C. Rauch

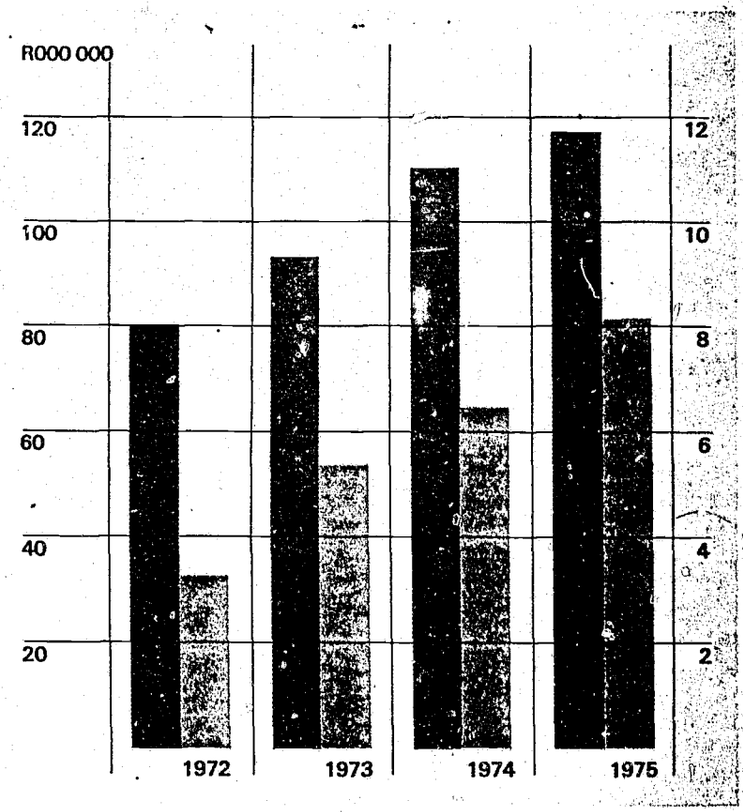
Die nommer tussen hakies na elke maatskappy se naam verwys na die kaarte op bladsye 6 en 7 waarin besonderhede van aandelekapitale aangegee word.

Verspreiders en leweransiers van goedere deur die Groep se vervaardigingseenhede geproduseer, asook van ander plaaslik vervaardigde en ingevoerde grondstowwe. Sy markte is die vervaardings-, ingenieurs-, mynbou-, bou-, landbou- en publieke sektore. Bedrywighede word in vyf gebiede ingedeel, vier in Suid-Afrika en Suidwes-Afrika en een wat Rhodesië en Malawi dek. Die maatskappye wat in Suid-Afrika handel dryf, is Stewarts & Lloyds of S.A. Ltd, Stewarts & Lloyds of South West Africa Ltd, J.H. Vivian & Co Ltd, H. Incledon & Co (South Africa) Ltd, Baldwins Ltd, Baldwins (Alloy Steels) (Pty) Ltd, Anderson Hardware (Pty) Ltd, en Salvalve (Pty) Ltd. In die Rhodesiese gebied is daar Stewarts & Lloyds of Rhodesia Ltd, J.H. Vivian & Wilfred Watson (Pty) Ltd, Baldwins Rhodesia (Pvt) Ltd, Stewarts & Lloyds (Malawi) Ltd, en H. Incledon (Central Africa) Ltd.

Suid-Afrikaanse gebied

Nieteenstaande die minder gunstige handelstoestande gedurende die jaar ondervind, het die groot verskeidenheid bedrywighede volgehoue winsgewendheid verseker. Daar was 'n skielike omwenteling in die leweringsituasie waar toestande van ernstige tekorte en gevolglike vertraagde aflewerings oorgegaan het tot 'n skerp verkorting van afleweringstyd, en die meeste grondstowwe was nou geredelik bekombaar in 'n uiters mededingende mark. Vinnige optrede teen die gevaar van oormatige beleggings in voorraad, tesame met die instelling van 'n nuwe voorraadbeheerstelsel, het daartoe bygedra om die bedreiging vir kontantvloei te voorkom en voorrade aan die jaareinde was redelik gebalanseerd.

Trading division -- Handelsafdeling



the coming year, but the spread of activities of the division should ensure that profits will be sustained.

Stewarts & Lloyds of South Africa Ltd (1)
Supply difficulties prevailed for the first half of the year, but have now largely disappeared. Conditions were quiet, but trading results were good and in line with forecasts.
Early in the year, because of unattractive profits, tendering on large irrigation schemes involving design and installation, was discontinued. Group manufactured and agency irrigation equipment has since been sold on a supply only basis to both contractors and end users.
The Manzini branch was closed on 31 December 1974 and business in that area is now catered for by the Nelspruit branch.
New premises at Upington and augmented facilities at Bloemfontein, shared with H. Incledon & Co, were completed.
Plans are now being developed to relocate the Cape Town branch, currently operating at Woodstock.

Stewarts & Lloyds of South West Africa Ltd (3)
All operations showed substantial growth and exceeded profit targets.

J. H. Vivian & Co Ltd (11)
Distributors of imported and locally manufactured products to the mining and secondary industries.
Problems arose due to the contraction of overseas manufacturers' lead times, but freer availability of goods and continuing strong demand from the mining sector resulted in good performances.
During the year the Johannesburg branch was relocated in the Group's Park Central building, maintaining its storage accommodation at Steeledale. This move produced substantial savings.
At the end of the year it was decided to close the trading premises of the Pietermaritzburg branch and this market will in future be served by senior representation based in the town. Stocks will be supplied from the Durban branch.

H. Incledon & Co (South Africa) Ltd (23)
Builders hardware, plumbing material and valve merchants.
The slow-down in building activity continued through most of the period, adversely affecting volume and profitability.
In January the Pretoria branch was relocated in the Group premises at Waltloo. It is now well-placed to serve the major housing growth points in the east, south and south-east, benefiting from the new eastern road network.
As most valve business is now handled by Salvalve (Pty) Ltd (see page 24) the Johannesburg branch now concentrates on valves used in building and construction work.

Baldwins Ltd (29)
Steel stockholders.
The company markets the full range of steel plates, sheets, structural sections and reinforcing bars. It has discontinued its activities in the stainless steel field apart from a few special items.
The shortage of sheet and plate products eased considerably during the year, but structurals are still scarce. All operations achieved good results.
The cut-to-length line at the Reef Service Centre reached full operational effectiveness early in the year and is ready

Dit is moeilik om die peil van markaanvraag vir die komende jaar te voorspel, maar die uitgebreidheid van bedrywighede van die afdeling behoort te verseker dat winste volgehou sal word.

Stewarts & Lloyds of South Africa Ltd (1)
Leweringsprobleme het gedurende die eerste helfte van die jaar geheers, maar het nou grotendeels verdwyn. Toestande was stil, maar bedryfsresultate was goed en het gestrook met die voorspellings. Vroeg in die jaar, as gevolg van onbevredigende winste, is daar besluit om nie meer vir groot besproeiingskemas, wat ontwerp en installasie verg, te tender nie. Groepvervaardigde- en agentskapbesproeiingstoerusting is sedertdien slegs op 'n voorsieningsbasis verkoop aan sowel kontrakteurs as eindverbruikers.
Die Manzinitak is op 31 Desember 1974 gesluit en die Nelspruittak voorsien nou in die besigheidsbehoeftes van daardie gebied.
Nuwe persele by Upington en vergrote fasiliteite by Bloemfontein, wat met H. Incledon & Co gedeel word, is voltooi.
Planne word nou op tou gesit om die Kaapstadse tak wat tans by Woodstock geleë is, te verskuif.

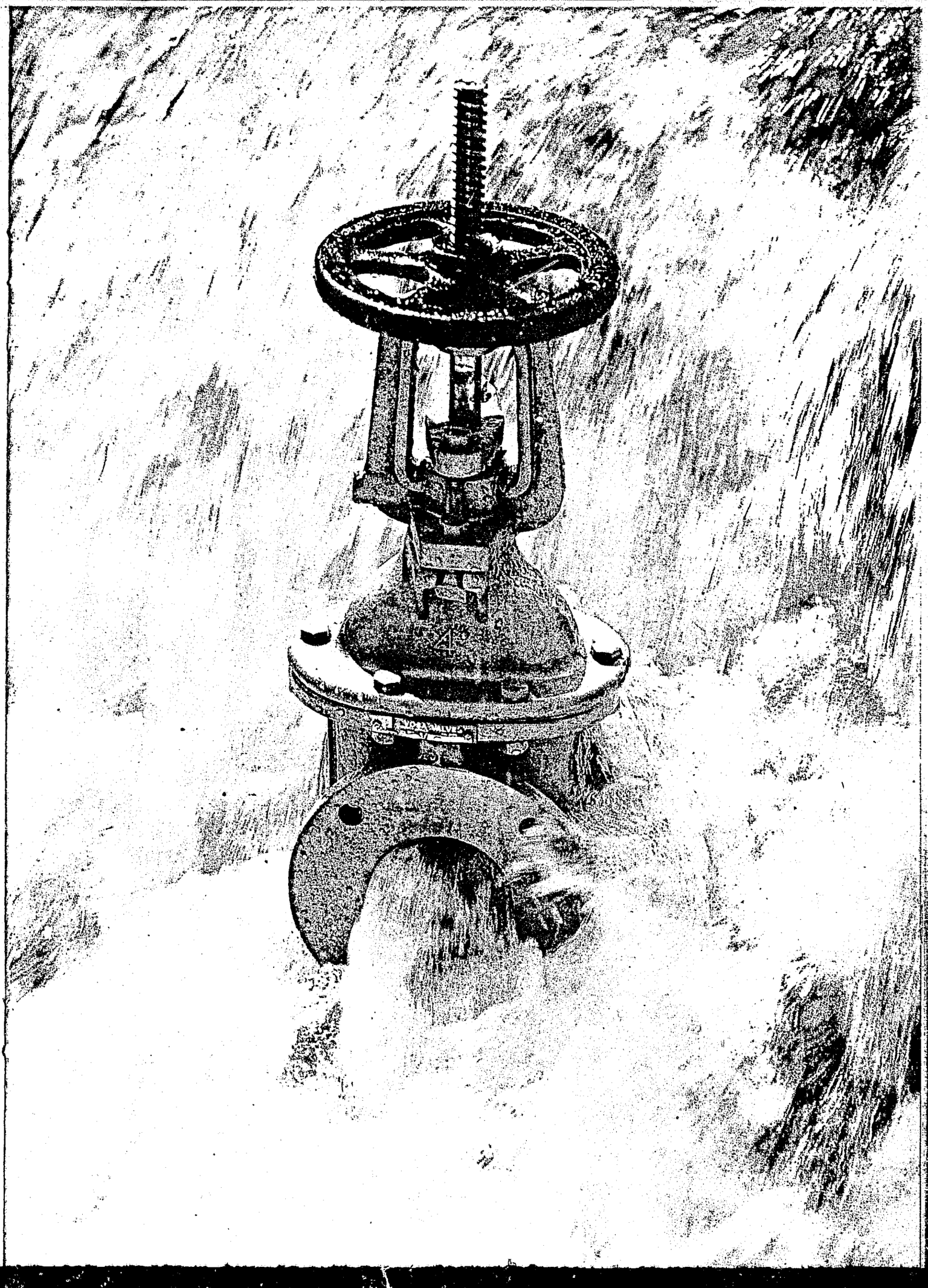
Stewarts & Lloyds of South West Africa Ltd (3)
Alle bedrywighede het wesenlike groei getoon en het winsdoelwitte oorskry.

J.H. Vivian & Co Ltd (11)
Verspreiders van ingevoerde en plaaslik vervaardigde produkte aan die mynbou- en sekondêre nywerhede.
Probleme het ontstaan vanweë die verkorting van buitelandse vervaardigers se afleweringstye maar die geredelike beskikbaarheid van goedere en die volgehoue sterk aanvraag vanaf die mynbousektor het gelei tot goeie prestasie.
Gedurende die jaar is die Johannesburgse tak in die Groep se Park Central-gebou hervestig, maar het sy bergruimte by Steeldale behou. Hierdie verhuising het wesenlike besparings opgelewer.
Daar is aan die einde van die jaar besluit om die handelspersele van die Pietermaritzburgse tak te sluit en hierdie mark sal in die toekoms behartig word deur senior verteenwoordiging in dié stad gevestig. Voorrade sal vanaf die Durbanse tak voorsien word.

H. Incledon & Co (South Africa) (23)
Bouersysterware, loodgietersmateriaal en klephandelaars.
Die daling in boubedrywigheid het gedurende die grootste gedeelte van die tydperk voortgeduur en het volume en winsgewendheid nadelig getref. In Januarie is die Pretoriase tak in die groep se persele by Waltloo he vestig. Dit is nou gunstig geleë om die hoofbehuisingsgroeipunte in die ooste, suide en suid-ooste te dien, aangesien dit voordeel trek uit die nuwe padnetwerk in die ooste.
Aangesien die meeste klepbesigheid nou deur Salvalve (Pty) Ltd (sien bladsy 24) behartig word, lê die Johannesburgse tak hom toe op kleppe wat in bou- en konstruksiewerk gebruik word.

Baldwins Ltd (29)
Staalleweransiers.
Die maatskappy bemark die volle reeks staalplate, fynplate, struktuurprofiele en wapeningstawe. Afgesien van 'n paar spesiale items, het die maatskappy sy bedrywigheid op die gebied van vlekvrye staal laat vaar.

Vosa rising spindle cast iron gate valve.
Vosa-gietystersluisklep met stygspil.



to exploit this growing market when the demand for consumer durables improves.
Plans are being developed to relocate the Cape Town branch, currently operating from Woodstock.

Baldwins (Alloy Steel) (Pty) Ltd, Brakpan (30)
Distributors and heat treaters of alloy steels.
The steel sales branch moved from Benrose to Brakpan where it shares facilities with Baldwins Reef Service Centre and the heat treatment department. The range of steel products stocked was reduced and good results were achieved by both departments.

Anderson Hardware (Pty) Ltd, Port Elizabeth (38)
Suppliers of tools, hardware and allied products to the retail market.
The slowdown in the building sector affected trading. Under these circumstances results achieved were satisfactory.

Salvalve (Pty) Ltd, Benrose (20)
Valve specialists.
This new company will operate from Benrose early in the new financial year and represents a fusion of the valve selling activities of the Stewarts & Lloyds and Incledon branches in Johannesburg.
With its wide range of products and concentration of technical skills, it aims to capture a substantial share of the growing mining and infrastructural expenditure.
Its skills are available country-wide and it is planned that branches will shortly be established in other industrial centres.

The Rhodesian region
Activities are similar to those in South Africa, but also include the operation of the tube mill at Que Que.
Import currency allocations were progressively lowered during the year, resulting in a drop in stock levels and market growth. No improvement is expected in the first half of 1976.
Price legislation introduced during the year had, and will continue to have, the effect of lowering gross margins.
At the same time there is increasing competition in the distribution of locally produced goods and a distortion in the market caused by an imbalance between imported and domestic production. It is impossible to forecast when this situation will improve.
Early in the year the shareholding in the Rhodesian Pipe Company was sold. Arrangements for the supply of plastic tube to the Group's distribution outlets were made with the purchaser.

Stewarts & Lloyds of Rhodesia Ltd (21)
This is the Division's major trading outlet in the region and is also the holding company for the Group's Rhodesian activities. It provides services to Stewarts & Lloyds (Malawi) Ltd and H. Incledon and Co (Central Africa) Ltd.
Operating problems at the Que Que mill arose during the first half of the year, seriously affecting profits. The difficulties centred on mechanical defects and, to some extent, on a shortage of skills.
Fabrication facilities were under-utilised due to a delay in the country's electrical transmission development.
Countering this, excellent progress was made in the development and sale of the modular steel structure system known as "Torspan". This was successful in both

Die tekort aan fynplaat- en plaatprodukte is gedurende die jaar aansienlik verlig, maar struktuurstaal is nog skaars.
Alle bedrywighede het goeie resultate behaal.
Die sny-tot-lengte-lyn by die Randse Dienssentrum het al vroeg in die jaar volle bedryfsdoeltreffendheid bereik en is gereed om hierdie groeiende mark te ontgin namate die aanvraag na duursame verbruiksartikels verbeter.
Planne word tans geprakseer om die Kaapstadse tak wat teenswoordig by Woodstock in bedryf is, te hervestig.

Baldwins (Alloy Street) (Pty) Ltd, Brakpan (30)
Verspreiders en hittebehandelaars van allooistaalsoorte.
Die staalverkooptak het vanaf Benrose na Brakpan verhuis waar hy geriewe deel met Baldwins Randse Dienssentrum en die hittebehandelingsafdeling. Die reeks staalprodukte wat aangehou word, is verminder, en goeie resultate is deur albei afdelings opgelewer.

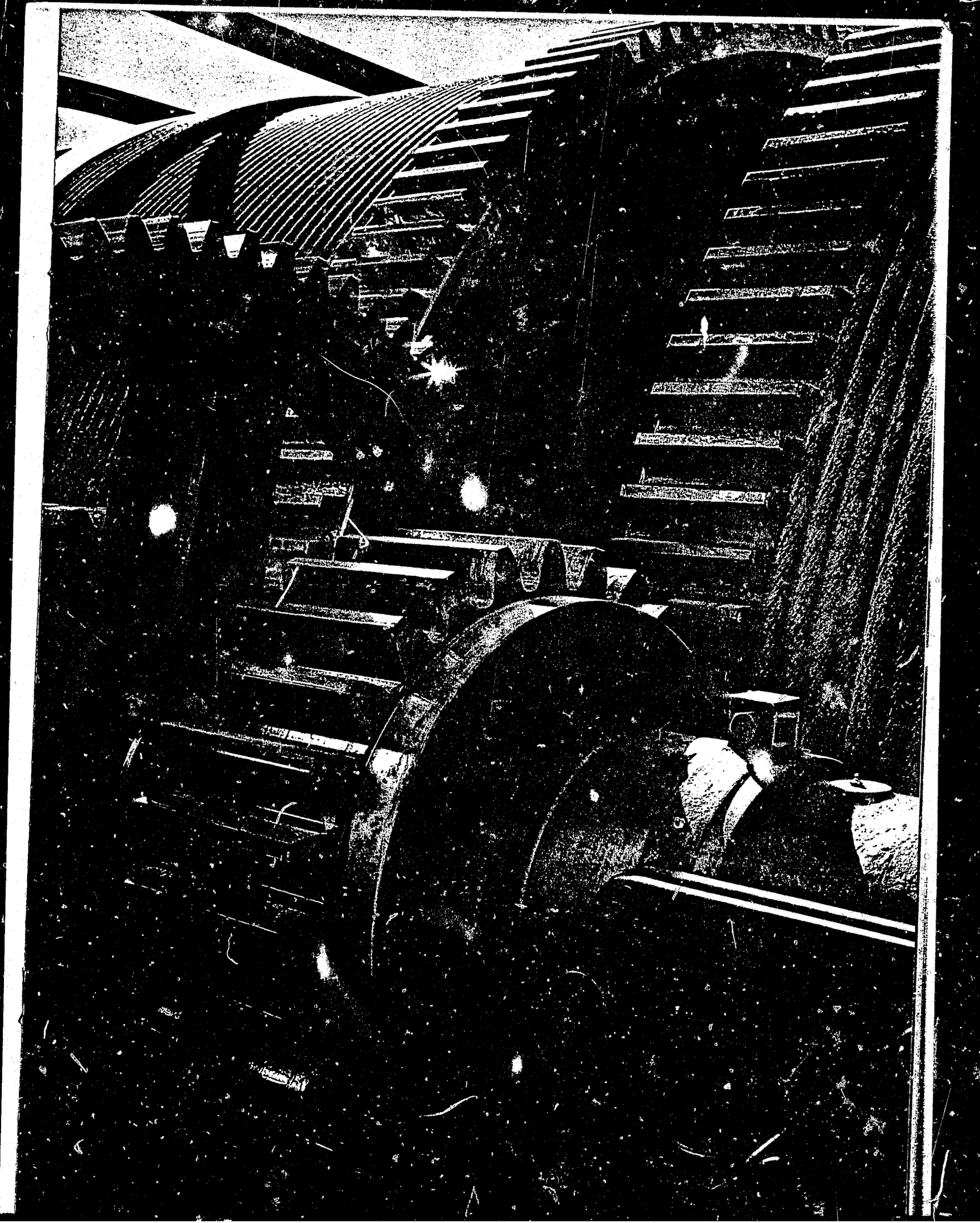
Anderson Hardware (Pty) Ltd, Port Elizabeth (38)
Leweransiers van gereedskap, ysterware en verwante produkte aan die kleinhandelmark.
Die daling in die bousektor het handel getref. Onder hierdie omstandighede is bevredigende resultate behaal.

Salvalve (Pty) Ltd, Benrose (20)
Klepspesialiste
Hierdie nuwe maatskappy sal vroeg in die boekjaar vanaf Benrose handel dryf en verteenwoordig 'n samesmelting van die klepverkoopsbedrywighede van die Stewarts & Lloyds- en Incledontakke in Johannesburg.
Met sy wye reeks produkte en konsentrasie van tegniese vaardighede, streef die maatskappy daarna om 'n wesenlike gedeelte van die groeiende myn- en infrastrukturele uitgawes te verower.
Sy vaardighede is landswyd beskikbaar en daar word beplan om takke binnekort in ander nywerheidsentrums te stig.

Die Rhodesiese gebied
Bedrywighede is soortgelyk aan dié in Suid-Afrika, maar sluit ook die werksaamhede van die pypmeul by Que Que in.
Invoervalutatoedelings is in toenemende mate gedurende die jaar verminder, wat gelei het tot 'n daling in voorraadpeile en markgroei. Geen verbetering word in die eerste helfte van 1976 verwag nie.
Wetgewing ten opsigte van pryse is gedurende die jaar ingestel en het die verlaging van brutogrense tot gevolg gehad en hierdie toestande sal steeds voortduur.
Terselfdertyd is daar toenemende mededinging met die verspreiding van plaaslik vervaardigde goedere en 'n verwarring in die marktoestande as gevolg van 'n gebrek aan ewewigtigheid tussen ingevoerde en binnelandse produksie. Dit is onmoontlik om te voorspel wanneer hierdie toestand sal verbeter. Vroeg in die jaar is die aandelebesit in die Rhodesian Pipe Company verkoop. Reëlings is met die koper getref vir die verskaffing van plastiekpyp aan die Groep se verspreidingsafsetpunte.

Stewarts & Lloyds of Rhodesia Ltd (21)
Hierdie is die Afdeling se hoofbedryfsafsetpunt in die gebied, asook die houermaatskappy vir die Groep se Rhodesiese bedrywighede, en lewer dienste aan Stewarts & Lloyds (Malawi) Ltd en H. Incledon & Co (Central Africa) Ltd.
Bedryfsprobleme het gedurende die eerste helfte van die jaar ontstaan en het winste ernstig getref. Die hoofprobleme was meganiese defekte en, in 'n sekere mate, 'n tekort aan vaardighede.

Fulton 1100 kW double drum mine winder.
Fulton se 1100 kW-myndubbelwentrommel.



rural and urban areas and is used for storage sheds, African markets and beer halls.
Plans are well advanced for extending the range of products made at Que Que and for the manufacture of certain of the Group's designs under licence.
Despite import restrictions, the trading outlets continued to operate profitably by adapting activities to the materials available.

J. H. Vivian & Wilfred Watson (Pty) Ltd (19)
Suppliers of tools, hardware and allied products to the mining and other industries, and direct to the public.
Results for the year were satisfactory despite import restrictions. "Vivid" door gear, introduced last year, is becoming increasingly popular and improved assembly methods were developed. Storage facilities for refractories have been increased.

Baldwins Rhodesia (Pvt) Ltd (46)
Steel stockholders.
Good results were achieved despite supply problems and import restrictions. The product range was augmented by the addition of asbestos cement products, in particular roofing sheets.
The bulk store at Que Que became operational at mid-year and provides a springboard for growth in the developing market in the Midlands and Triangle/Chiredzi areas.

Stewarts & Lloyds (Malawi) Ltd (4)
Based in Blantyre, the company distributes Group manufactured and agency products.
The market remained buoyant and exceptional results were achieved.

H. Incledon & Co. (Central Africa) Ltd (24)
The company operates in the specialised valve market, importing valves for a limited range of customers.

Vervaardigingsfasiliteite is nie ten volle gebruik nie, vanweë 'n vertraging in die land se elektriese transmissie-ontwikkeling. Daarteenoor, is uitstekende vordering gemaak met die ontwikkeling en verkoop van die modulêre staalstruktuurstelsel bekend as "Torspan". Hierdie was in beide plattelandse en stedelike gebiede suksesvol en word vir pakskure, Bantoemarkte en -bierhuise gebruik.
Planne is al ver gevorder vir die uitbreiding van die reeks produkte by Que Que vervaardig, en vir die vervaardiging van sekere van die Groep se ontwerpe in lisensie.
Nieteenstaande invoerbeperkings het die handels-afsetpunte steeds winsgewend handel gedryf deur bedrywighede aan te pas by die beskikbare grondstowwe.

J.H. Vivian & Wilfred Watson (Pty) Ltd (19)
Leweransiers van gereedskap, ysterware en verwante produkte aan die mynbou- en ander nywerhede, en regstreeks aan die publiek.
Resultate vir die jaar was bevredigend ondanks invoerbeperkings. "Vivid"-deurgerei, verlede jaar vir die eerste keer vervaardig, word al hoe gewilder en verbeterde monteringsmetodes is ontwikkel. Bergingsgeriewe vir vuurvaste stowwe is ook vergroot.

Baldwins Rhodesia (Pvt) Ltd (46)
Staalleweransiers.
Goeie resultate is behaal ten spyte van leweringsprobleme en invoerbeperkings. Die produktereeks is aangevul deur die byvoeging van asbessementprodukte, in besonder dakplate.
Die magasyn by Que Que het in die middel van die jaar in werking getree en dien as aansporing tot groei in die ontwikkelende mark in die Middellande en Triangle/ Chiredzi-gebiede.

Stewarts & Lloyds (Malawi) Ltd (4)
In Blantyre geleë, versprei die maatskappy vervaardigde- en agentskapprodukte. Die mark het veerkragtig gebly en uitstekende resultate is behaal.

H. Incledon & Co (Central Africa) Ltd (24)
Die maatskappy dryf handel in die gespesialiseerde klepmark, en voer kleppe vir 'n beperkte reeks klante in.

TUBES DIVISION

Executive director: W. F. Spence

The number in brackets after each company's name refers to the charts on page 6 and page 7 giving details of share capitals.

Manufacturers and bulk wholesalers of tubes, pipes and allied products.
The division incorporates Tubemakers of South Africa Ltd (Tosa), Tosa Structural Engineering Division, Tube & Pipe Industries (Pty) Ltd (TPI), Maksal Tubes (Pty) Ltd, Pipe Couplings (Pty) Ltd, Bundy Tubing of South Africa (Pty) Ltd and the Plastics Division.
As a whole the division had a good year and two of its companies, Tubemakers of South Africa Ltd and Pipe Couplings (Pty) Ltd benefited from the increasing activity of the mining industry and infrastructural development. However, the other companies were adversely affected by the decline in demand for consumer durables and the slack state of the building and motor industries.

Tubemakers of South Africa Ltd (Tosa), Vereeniging (2)
This company produces and markets seamless and welded steel tubes, tubular pipe fittings and flanges, tubes for all mechanical and fluid applications and stainless steel tubing. The fabrication department produces conventional and space frame tubular steel structures, lighting and power transmission poles and flanged and shouldered-end tubing for the mining industry.
In the early part of the year performance was limited by a shortage of steel but supplies later improved and production increased accordingly. However, certain markets, principally the building and allied industries, were by then slack, thus limiting the opportunities for taking advantage of the improved raw material supply.
A plant to slit wide steel coil into tube making widths was installed and has improved the flexibility of production planning.
Costs of materials and wages continued to rise, the increase on steel strip for welded tube manufacture being 26% during the financial year.

PYPAFDELING

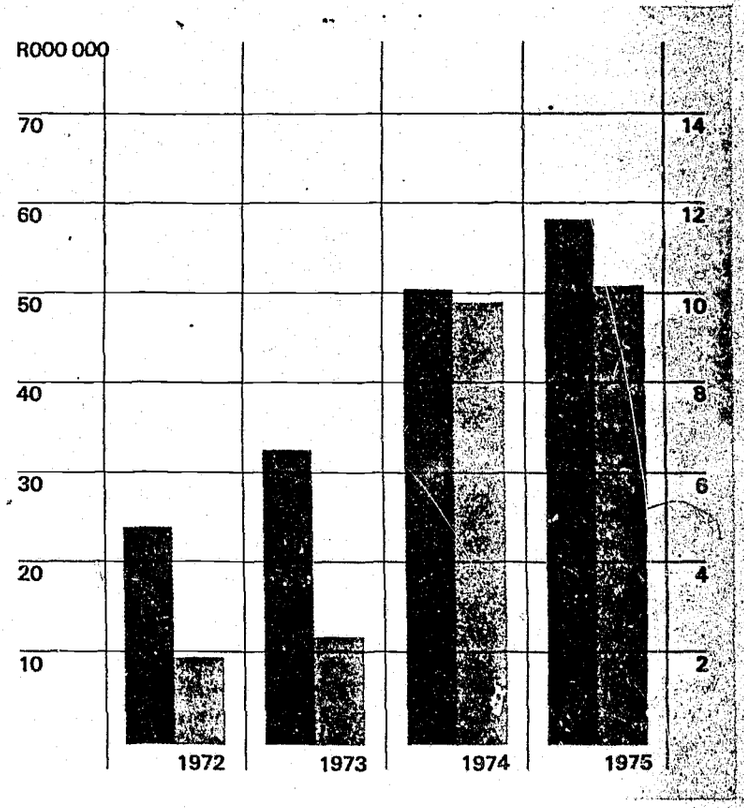
Uitvoerende direkteur: W. F. Spence

Die nommer tussen hakies na elke maatskappy se naam verwys na die kaarte op bladsye 6 en 7 waarin besonderhede van aandelekapitale aangegee word.

Vervaardigers en grootmaatgroothandelaars van pype en verwante produkte.
Die afdeling behels Tubemakers of South Africa Ltd. (Tosa), Tosa-afdeling vir Struktuuringenieurswerk, Tube & Pipe Industries (Pty) Ltd (TPI), Maksal Tubes (Pty) Ltd en die Plastiekafdeling.
As geheel het die afdeling 'n goeie jaar agter die rug en twee van sy maatskappye, Tubemakers of South Africa Ltd en Pipe Couplings (Pty) Ltd het gebaat by die toenemende bedrywigheid van die mynbounywerheid en infrastrukturele ontwikkeling. Ander maatskappye is egter nadelig getref deur die afname in aanvraag na duursame verbruiksartikels en ook deur die trae toestand van die bou- en motornywerhede.

Tubemakers of South Africa Ltd (Tosa), Vereeniging (2)
Hierdie maatskappy vervaardig en bemark naatlose en gesweiste staalpype, pyptoebehore en flense, pype vir alle meganiese gebruik en vir vloeistowwe en vlekvrystaalpype. Die vervaardigingsafdeling vervaardig konvensionele en spasieerraamstaalpypstruktuur, verligting- en kragtransmissiepale en pype met flens- en skouerente vir die mynbedryf.
In die vroeë gedeelte van die jaar is resultate beperk deur 'n staaltekort, maar voorrade het later verbeter en produksie het dienooreenkomstig toegeneem. Teen daardie tyd was sekere markte, hoofsaaklik die bou- en verwante nywerhede, traag; derhalwe is die geleenthede om uit die verbeterde grondstofvoorraad voordeel te trek, in die wiele gery.
'n Aanleg waar breë staalrolle in breedtes vir pypvervaardiging gesny word, is geïnstalleer en het die aanpasbaarheid van produksiebeplanning bevorder.
Grondstofkoste en lone het steeds gestyg, terwyl die vermeerdering op staalstrook vir die vervaardiging van gesweiste pype 26% gedurende die boekjaar was.

Tubes division
Pypafdeling



Tosa Structural Engineering Division, Benrose
This division had a particularly successful year and the shops concerned with manufacture were fully loaded. Further systems of modular construction were developed during the year and are now in production.

Tube & Pipe Industries (Pty) Ltd, Germiston (6)
Slack conditions in the building and construction sectors of the economy adversely affected performance. However, the company successfully maintained its share of the total market.

Maksal Tubes (Pty) Ltd, Springs (31)
Manufacturers of a wide range of copper and copper-alloy tubes.
The credit squeeze and the recession in the building and domestic appliance manufacturing industries resulted in a drastic reduction in demand for all products. This necessitated cutting production to an extremely low level and retrenching a large proportion of production workers. Almost without exception, customers found themselves in an overstocked position and the year was characterised by requests for either cancellation of orders or deferment of deliveries.
Towards the end of the year there were indications that surplus stocks had been liquidated and the rate of ordering increased.
Despite these adverse factors, profitability was reasonably maintained.

Pipe Couplings (Pty) Ltd, Chamdor (9)
Manufacturers of pipe couplings and accessories.
The demand for Viking Johnson couplings improved, as did the use of pedestal couplings. Sales of Viking Johnson flange adaptors and step couplings for jointing pipes of different outside diameters increased. The company is diversifying into the manufacture and marketing of the Victaulic grooved system of pipe jointing.
Due to raw material shortages during the first half of the year the full production capacity of the new Chamdor factory could not be achieved, However, trading for the year showed satisfactory growth.

Bundy Tubing Co of South Africa (Pty) Ltd, King William's Town (10)
Manipulators, fabricators and distributors of imported Bundyweld steel tubing for use in the refrigeration and automotive industries.
Plant for manufacturing Bundyweld tube locally was installed at a capital cost of R800 000 and production commenced in November 1975.
Sales were well below both forecast and last year's record level. This was caused by a decline in the consumer durable and automotive market, aggravated by the advent of TV and is expected to continue well into 1976.
The low level of production and sales and the increased cost of raw materials affected performance. However, strict control of expenses enabled the company to remain profitable.

Plastics Division, Vereeniging
Manufacturers and suppliers of PVC and high and low density polyethylene pipes and also of polypropylene twines and strapping.
A considerable decline in the demand from the building industry and agriculture for plastic products severely affected performance.
Raw materials are in free supply, but the high domestic price has had a serious effect on market acceptance and usage.
Continued uncertainty in the economy retards the return to normal growth rates.

Tosa Structural Engineering Division, Benrose
Hierdie afdeling het 'n besonder suksesvolle jaar agter die rug en die werkwinkels betrokke in vervaardiging was tot volle vermoë in gebruik. Verdere stelsels van modulêre konstruksie is gedurende die jaar ontwikkel en is nou in volle produksie.

Tube & Pipe Industries (Pty) Ltd Germiston (6)
Trae toestande in die bou- en konstruksiesektore van die ekonomie het prestasie nadelig getref. Die maatskappy het egter sy aandeel van die totale mark behou.

Maksal Tubes (Pty) Ltd, Springs (31)
Vervaardigers van 'n wye reeks koper- en koperallooipype.
Die kredietbeperking en die resessie in die bou- en huishoudtoestelvervaardigingsnywerhede het 'n ingrypende vermindering in die aanvraag na alle produkte tot gevolg gehad. Dit het noodwendig gelei tot die vermindering van produksie tot 'n besondere lae vlak asook die afdanking van 'n groot aantal produksiewerkers.
Byna sonder uitsondering, het klante gevind dat hul voorraad oortollig is en gevolglik is die jaar gekenmerk deur aansoeke om die kansellering van bestellings of die uitstelling van aflewerings.
Teen die jaareinde was daar aanduidings dat oortollige voorraad van die hand gesit is en die tempo van bestellings is verhoog.
Nieteenstaande hierdie ongunstige faktore is die winsgewendheid nogtans redelik gehandhaaf.

Pipe Couplings (Pty) Ltd, Chamdor (9)
Vervaardigers van pypkoppelings en toebehore.
Die aanvraag na Viking Johnson-koppelings asook die gebruik van voetstukkoppelings het verbeter. Verkope van Viking Johnson-flenspasstukke en trapkoppelings vir die las van pype van verskillende buite-deursneë het vermeerder. Die maatskappy brei verder uit tot die vervaardiging en bemarking van die Victaulic-groefstelsel vir die las van pype.
As gevolg van 'n tekort aan grondstowwe gedurende die eerste helfte van die jaar is die volle produksiekapasiteit van die nuwe fabriek by Chamdor nie bereik nie. Nogtans het die handelsbedrywighede 'n bevredigende groei getoon.

Bundy Tubing Co. of South Africa (Pty) Ltd, King William's Town (10)
Manipuleerders, vervaardigers en verspreiders van ingevoerde Bundyweld-staalpyp vir die gebruik in die verkoeling- en motornywerhede.
Aanleg vir die plaaslike vervaardiging van Bundyweld-pyp is, teen 'n kapitale koste van R800 000 geïnstalleer en produksie het in November 1975 begin.
Verkope was ver onder raming asook verlede jaar se rekordpeil. Dit is veroorsaak deur 'n afname in die mark vir duursame verbruiksartikels en in die motorhandel wat verder vererger is deur die koms van T.V. en na verwagting sal hierdie toestand tot laat in 1976 heers.
Die lae produksie- en verkoopspeil tesame met die verhoogde koste van grondstowwe het die resultate beïnvloed, maar streng beheer oor onkoste het die maatskappy in staat gestel om winsgewend te bly.

Afdeling Plastiek, Vereeniging
Vervaardigers en leweransiers van P.V.C.-, poli-etileenpype van hoë en lae densiteit, asook poli-propileen-tou en -band.
'n Wesenlike afname in die aanvraag na plastiekprodukte deur die bounywerheid en landbou het die resultate ernstig beïnvloed.
Grondstowwe is vrylik beskikbaar maar die hoë plaaslike prys het 'n ernstige uitwerking op die aanneemlikheid en gebruik deur die handel gehad. Voortdurende onsekerheid in die ekonomie vertraag die terugkeer na normale groeikoerse.

MANUFACTURED PRODUCTS DIVISION

Divisional general manager: P. F. Joubert

The number in brackets after each company's name refers to the charts on page 6 and page 7 giving details of share capitals.

Manufacturers, importers and suppliers of capital and other engineering equipment for the mining, industrial, agricultural and marine markets.
While manufacturing activities are concentrated in the Reef and Vereeniging areas, marketing is countrywide both direct and through distributors. Export potential was explored with limited success but future prospects appear encouraging.
The division consists of the following:
J. K. Fulton (Pty) Ltd, Lister Engine Assembly Division, Weiser Lock Co (South Africa) (Pty) Ltd, Vivian-Colt (Pty) Ltd, J. H. Vivian Mining Co (Pty) Ltd, Salweir (Pty) Ltd, Technical Products, Windmills and Machine Shop Division.

J. K. Fulton (Pty) Ltd, Wadeville (12)
Designers, manufacturers and suppliers of winders, hoists, winches and other mining equipment as well as marine winches and deck gear. Water control equipment such as sluice gates, slab gates and radial control gates is also designed and produced.
Although capital expenditure programmes for the forthcoming year by both the mining and civil construction industries are likely to be below those of the current year, the company intends to maintain overall performance by diversifying into the manufacture of other products for the mining industry. These will include shuttle cars, face drilling machines, continuous loaders and continuous mining equipment.

Lister Engine Assembly Division, Vereeniging
Producers of diesel engines in the low and medium horsepower ranges from imported and locally manufactured components, and assemblers of lighting plants for domestic and industrial use.
Injection of local content to replace imported components

AFDELING VERVAARDIGDE PRODUKTE

Algemene Afdelingsbestuurder: P. F. Joubert

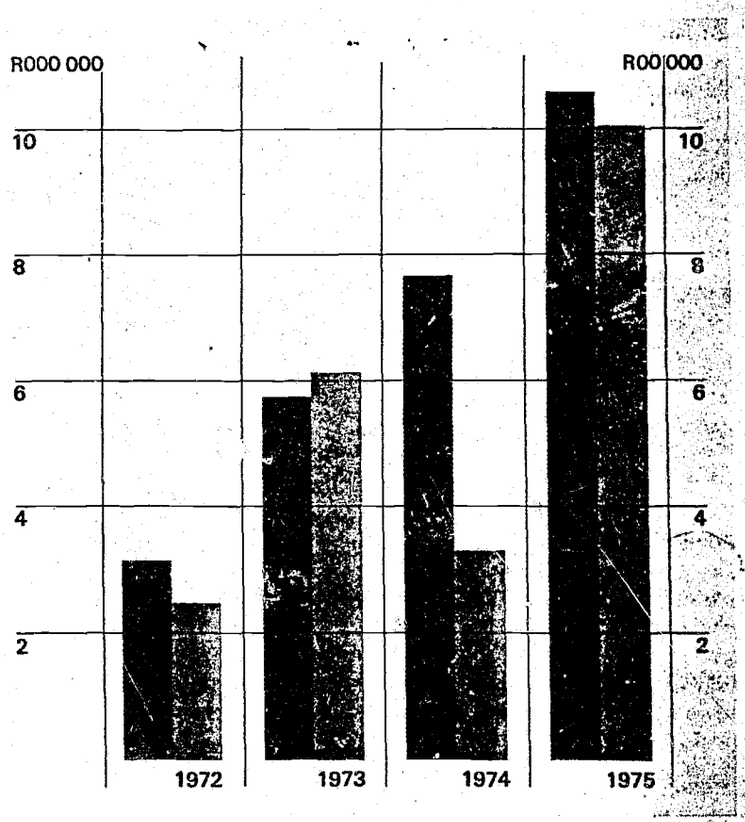
Die nommer tussen hakies na elke maatskappy se naam verwys na die kaarte op bladsye 6 en 7 waarin besonderhede van aandelekapitale aangegee word.

Vervaardigers, invoerders en leweransiers van kapitaal- en ander ingenieurstoerusting vir die mynbou-, industriële-, landbou- en skeepvaartmarkte. Alhoewel die vervaardigingsaktiwiteite in die Rand- en Vereeniginggebiede gekonsentreerd is, word produkte direk en deur verspreiders landswyd bemark.
Uitvoerpotensiaal is met beperkte sukses ondersoek maar die toekomstige vooruitsigte blyk bemoedigend te wees.
Die afdeling bestaan uit die volgende:
J.K. Fulton (Pty) Ltd, Afdeling Montering van Listerenjins, Weiser Lock Co (South Africa) (Pty) Ltd, Vivian-Colt (Pty) Ltd, J.H. Vivian Mining Co. (Pty) Ltd, Salweir (Pty) Ltd, Afdeling Tegniese Produkte, Windmeule- en Masjienwerkwinkelafdeling.

J.K. Fulton (Pty) Ltd, Wadeville (12)
Ontwerpers, vervaardigers en leweransiers van hysers, hystoestelle en ander toerusting vir mynbou asook marinehysers en dektuig. Waterbeheertoerusting soos sluishekke, bladhekke en radiale kontrolehekke word ook ontwerp en vervaardig.
Alhoewel daar verwag word dat die kapitaaluitgawe-programme in die aanstaande jaar van beide die mynbou- en siviele konstruksienywerhede minder as dié vir die huidige jaar sal wees, is die maatskappy voornemens om die algehele resultate deur die diversifikasie in die vervaardiging van ander produkte vir die mynbou te handhaaf. Hulle sal wisselkarre, frontboormasjiene, deurlopende laaitoerusting en deurlopende delftoerusting insluit.

Afdeling Montering van Listerenjins, Vereeniging
Produsente van dieselenjins in die lae- en medium-perdekragreekse van ingevoerde en plaaslik vervaardigde onderdele en monteerders van verligtingsaanlêe vir

Manufactured products division
Afdeling vervaardigde produkte



is increasing in accordance with targets. The product range has been extended and financial results are in line with budget. The assembly plant looks forward to greater activity in the coming year with an increased share of the very competitive market.

Weiser Lock Co (South Africa) (Pty) Ltd, Benrose (25)
The company assembles the "Weiser" range of door locks from components imported from the United States of America.
Turnover during the first part of the financial year was seriously affected by the drop in building activity but slightly improved conditions were experienced during the second half of the year.
Continued low activity is expected for the first half of the coming financial year with a possible upturn in trade beginning in the second half.

Vivian-Colt (Pty) Ltd, Baragwanath (sales branches at Durban and Cape Town) (18)
The company designs, manufactures and installs Colt industrial ventilation and fire venting systems under licence from Colt International Ltd of Great Britain. This is largely carried out on a sub-contractural basis to the construction industry.
Due to downturn in the industry, particularly in the early part of the financial year, sales were below forecast. However, the company maintained its place in the market because of its strength in technical design and manufacture. With the increasing accent placed on better working conditions and the growing realisation of the importance of fire venting of factories and warehouses, sales in these sectors are expected to grow.
The company won a number of large sheet metal and light engineering contracts. These included drying ovens for the steel and metal industry, and fermentation tanks for the tea-growing industry.
It is anticipated that in the latter part of 1976 the company will improve its performance in all sectors.

J. H. Vivian Mining Co (Pty) Ltd, Benoni (13)
Manufacturers and suppliers of equipment for the mining sector.
Results for the year were below target.
Rationalisation was carried out and certain product lines discontinued. At the same time, the company broadened its base by diversifying into the industrial sector.
In August the company moved from Elandsfontein into new premises in Benoni.

Salweir (Pty) Ltd, Benoni (35)
A pump manufacturing company, marketing to all sectors of the economy, with a service centre in Cape Town catering for marine, naval and industrial requirements.
Problems occurred due to shortages of skilled men and material and, while targets were not achieved, the satisfactory order book coupled with increased local manufacture and planned penetration into new markets augurs well for the future. Tenders were submitted during the year for large pumps for new Escom power stations and these were offered from local manufacture.

Technical Products, Windmills & Machine Shop Division, Vereeniging
The division is the largest producer of windmills in the country. Other products are sundry pumping accessories and specialised pipe joints and fittings for the mining sector.
Low demand from the agricultural sector, resulted in targets not being achieved. The S & L windmill retains its dominant share of the market.

huishoudelik en industriële gebruik.
Die vervanging van ingevoerde onderdele deur plaaslike inhoud neem toe volgens die doelwitte. Die reeks produkte is uitgebrei en finansiële resultate strook met die begroting. Die monteringafdeling sien uit na groter bedrywighede in die komende jaar met 'n vermeerderde aandeel in die besonder mededingende mark.

Weiser Lock Co (South Africa) (Pty) Ltd, Benrose (25)
Die maatskappy monteer die "Weiser"-reeks deurslotte van onderdele wat uit die Verenigde State van Amerika ingevoer is.
Omset gedurende die eerste gedeelte van die boekjaar is ernstig getref deur die afname in boubedrywigheid, maar effens verbeterde toestande is gedurende die tweede helfte van die jaar beleef.
Voortgesette lae bedrywigheid word vir die eerste helfte van die komende boekjaar verwag met 'n moontlike opwaartse neiging in handel vanaf die tweede helfte.

Vivian-Colt (Pty) Ltd, Baragwanath (verkooptakke by Durban en Kaapstad) (18)
Die maatskappy ontwerp, vervaardig en installeer Colt-industriële belugting- en vuurontlugtingstelsels in lisensie van Colt International Ltd, van Groot-Brittanje. Hierdie bedrywighede word hoofsaaklik op 'n subkontrakteurs-basis tot die konstruksienywerheid uitgevoer. Vanweë 'n afwaartse neiging in die nywerheid, veral gedurende die vroeë gedeelte van die boekjaar, was verkope benede raming. Die maatskappy het egter sy plek in die mark gehandhaaf vanweë sy sterkte op die gebied van tegniese ontwerp en vervaardiging. Met die toenemende klem wat op beter werkstoestande gelê word, asook die toenemende besef van die belangrikheid van vuurontlugting van fabrieke en pakhuise, sal verkope na verwagting in hierdie sektore toeneem.
Die maatskappy het 'n aantal kontrakte vir groot plaatmetaal en ligte ingenieurswerk ingewin. Hierdie sluit droogoonde vir die staal- en metaalnywerheid en gistingstenke vir die teekweeknywerheid in.
Na verwagting sal die maatskappy gedurende die laaste gedeelte van 1976 sy prestasie in alle sektore verbeter.

J.H. Vivian Mining Co (Pty) Ltd, Benoni (13)
Vervaardigers en leweransiers van toerusting vir die mynsektor.
Resultate vir die jaar was benede doelwit. Rasionalisasie is uitgevoer en sekere produktereekse is laat vaar.
Terselfdertyd het die maatskappy sy basis uitgebrei deur diversifikasie in die nywerheidsektor. In Augustus het die maatskappy vanaf Elandsfontein na nuwe persele in Benoni verhuis.

Salweir (Pty) Ltd, Benoni (35)
'n Pompvervaardigende maatskappy, wat sy produkte aan alle sektore van die ekonomie bemark, met 'n dienssentrum in Kaapstad wat in die seevaart-, vloot en nywerheidsbehoeftes voorsien.
Probleme het ontstaan as gevolg van tekorte aan geskoolde manne en grondstowwe en hoewel doelwitte nie bereik is nie, is die bevredigende bestelboek tesame met vermeerderde plaaslike vervaardiging en beplande penetrasie in nuwe markte, 'n veelbelowende teken vir die toekoms. Tenders is gedurende die jaar ingedien vir groot pompe vir die nuwe Escom-kragstasies en hierdie is uit plaaslike vervaardiging aangebied.

Tegniese Produkte, Windpompe en Masjienwerkwinkelafdeling, Vereeniging
Die afdeling is die grootste produsent van windpompe in die land. Ander produkte is diverse pompbenodigdhede en gespesialiseerde pyplasse en toebehore vir die mynsektor.
As gevolg van lae aanvraag uit die landbousektor is doelwitte nie behaal nie. Die Stewarts & Lloyds windpomp behou sy oorheersende aandeel van die mark.

FOUNDRY DIVISION

Executive director: H. A. Godwin

The number in brackets after each company's name refers to the charts on page 6 and page 7 giving details of share capitals.

Founders of grey and malleable cast iron, mass producers and bulk wholesalers of malleable cast iron fittings for electrical conduit and water pipe. Bulk suppliers of special castings to the South African Railways and Harbours and to the automotive industry.
The division consists of the following foundries:
African Malleable Foundries Ltd (AMF), J & C Malleable (Pty) Ltd, RMC Foundry (1959) (SA) (Pty) Ltd, Vosa Valves (Pty) Ltd, Vosa Valves Incorporated and Technical Products Foundry, Vereeniging.
The three malleable iron foundries exceeded their sales and profit targets but, due to recessionary conditions, the other elements of the division were unable to meet their forecasts.

African Malleable Foundries Ltd, Benoni (32)
The company specialises in the mass production of malleable iron water pipe and electrical conduit fittings. A major supplier of malleable iron castings to the mining, agricultural, transport and automobile industries, it also exports to the United States of America, Greece and the Middle East. It is anticipated that sales and profit targets for the coming year will be achieved.
Despite a downturn in certain sectors of the economy during the year, flexibility was such that it maintained a growth pattern in excess of budget and exceeded sales and profit forecasts.

J & C Malleable (Pty) Ltd, Boksburg (42)
This company is a mass production foundry operating in both the malleable and grey iron markets. It is a major supplier of castings to the South African Railways and Harbours. In addition, it supplies both the local and export markets with overhead electrical transmission line equipment.

GIETERYAFDELING

Uitvoerende direkteur: H. A. Godwin

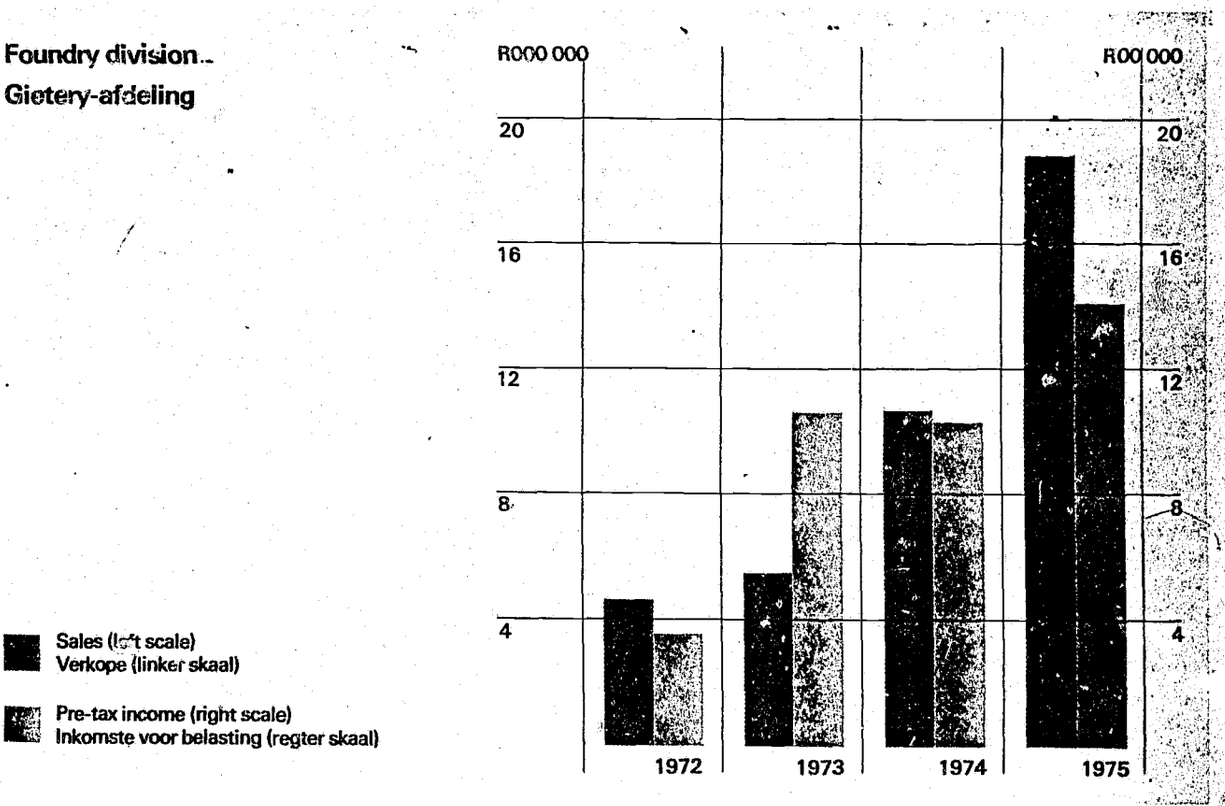
Die nommer tussen hakies na elke maatskappy se naam verwys na die kaarte op bladsye 6 en 7 waarin besonderhede van aandelekapitale aangegee word.

Gieters van grys- en smeebare gietyster, massaprodusente en grootmaatgroothandelaars van smeebaregietyster-toebehore vir elektriese leipype en waterpype. Grootmaatleweransiers van spesiale gietstukke aan die Suid-Afrikaanse Spoorweë en Hawens en aan die motornywerheid.
Die afdeling bestaan uit die volgende gieterye:
African Malleable Foundries Ltd (AMF), J & C Malleable (Pty) Ltd, RMC Foundry (1959) (SA) (Pty) Ltd, Vosa Valves (Pty) Ltd, Vosa Valves Incorporated en Technical Products Foundry, Vereeniging.
Die drie smeebareyster-gieterye het hulle verkoop- en winsdoelwitte oorskry, maar weens resessietoestande was die ander elemente van die Afdeling nie daartoe in staat om aan hulle ramings te voldoen nie.

African Malleable Foundries Ltd, Benoni (32)
Die maatskappy spesialiseer in die massaproduksie van smeebareyster-waterpype en elektriese leipyptoebehore. 'n Hoofleweransier van smeebareyster-gietstukke aan die mynbou-, landbou-, vervoer- en motornywerhede, voer hy ook na die Verenigde State van Amerika, Griekeland en die Midde-Ooste uit. Na raming sal verkoop- en winsdoelwitte vir die komende jaar verwesenlik word.
Nieteenstaande 'n afwaartse neiging in sekere sektore van die ekonomie gedurende die jaar, was daar so 'n mate van aanpassingsvermoë dat 'n groeipatroon gehandhaaf is wat nie net die begroting oorskry het nie, maar ook verkoop- en winsramings.

J & C Malleable (Pty) Ltd, Boksburg (42)
Hierdie maatskappy is 'n massaproduksiegietery wat in beide die smeebare- en grysystermarkte bedrywig is, en is hoofleweransier van gietstukke aan die Suid-Afrikaanse Spoorweë en Hawens. Daarbenewens voorsien hy beide die

Foundry division
Gietery-afdeling



Sales and profit targets were exceeded and it is expected that the forecasts for the new financial year will be met.

RMC Foundry (1959) SA (Pty) Ltd, Krugersdorp (47)
This company was acquired with effect from 1 October 1974 and operates a production malleable iron foundry and machine shop producing electrical conduit fittings and water pipe fittings.
Final results for the year were satisfactory and sales and profit targets were achieved.
With effect from 1 November 1975 the manufacturing operations were transferred to African Malleable Foundries Ltd to rationalize production facilities.

Vosa Valves (Pty) Ltd, Benoni (5)
Manufacturers of cast iron waterworks valves and industrial sluice valves. A downturn in demand affected operating results and the company was unable to achieve profit targets.
Despite the difficult trading conditions which can be expected in 1976 it is predicted that forecasts will be implemented.

Vosa Valves Incorporated USA (39)
Results of Vosa Valves' American subsidiary were adversely affected by the downturn in the U.S. economy. However, trading conditions are improving and as the Vosa product has proved highly acceptable it is expected that sales and profit targets will be achieved in the coming year.

Technical Products Division Foundry, Vereeniging
This is a grey iron foundry and produces castings for other group companies and especially for the manufacture of windmills.
Financial results were adversely affected by recessionary conditions. Investigations are being conducted with a view to producing an acceptable return on funds employed.

plaaslike- en uitvoermarkte met bogrondse elektriese transmissielynuitrusting. Verkoop- en winsdoelwitte is oorskry en na verwagting sal ramings vir die nuwe boekjaar verwesenlik word.

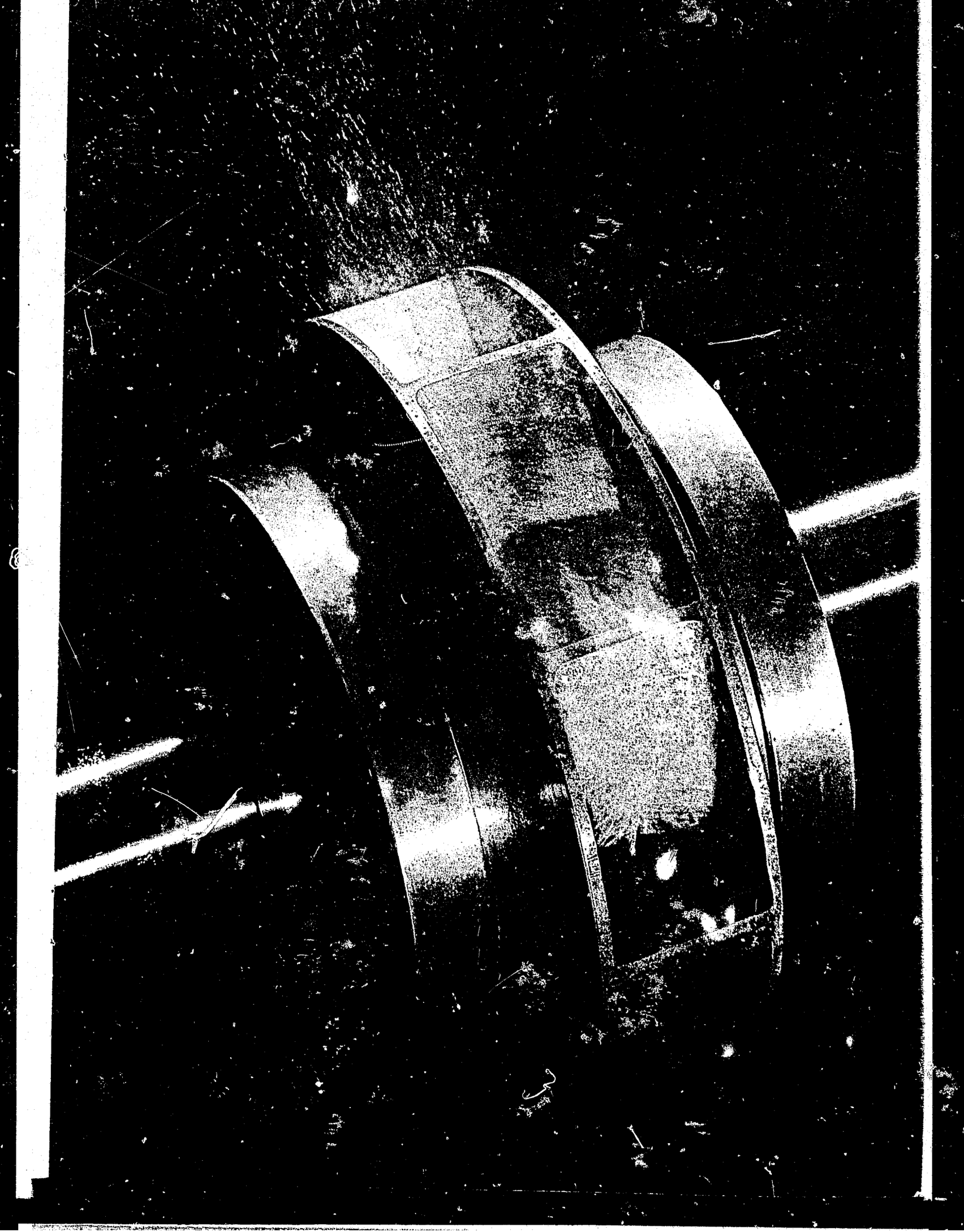
RMC Foundry (1959) SA (Pty) Ltd, Krugersdorp (47)
Hierdie maatskappy is verkry met ingang van 1 Oktober 1974 en besit 'n vervaardigende smeebareyster-gietery en masjienwerkwinkel wat elektriese leipyp- en waterpyp-toebehore vervaardig.
Finale resultate vir die jaar was bevredigend en verkoop- en winsdoelwitte is behaal.
Met ingang van 1 November 1975 is die vervaardigingsbedrywighede na African Malleable Foundry Ltd, oorgeplaas om vervaardigingsfasiliteite te rasionaliseer.

Vosa Valves (Pty) Ltd, Benoni (5)
Vervaardigers van gietysterwaterwerkkleppe en sluiskleppe vir die nywerheid. 'n Afwaartse neiging in aanvraag het bedryfsresultate getref en die maatskappy was nie daartoe in staat om winsdoelwitte te behaal nie.
Ten spyte van die moeilike handelstoestande wat in 1976 verwag kan word, word daar voorspel dat ramings verwesenlik sal word.

Vosa Valves Incorporated VSA (39)
Die resultate van Vosa Valves se Amerikaanse filiaal Vosa Valves Incorporated, is nadelig getref deur die afwaartse neiging in die ekonomie van die Verenigde State. Handelstoestande verbeter egter nou en aangesien die Vosa-produk hoogs geskik blyk te wees, sal verkoop- en winsdoelwitte na verwagting in die komende jaar behaal word.

Technical Products Division Foundry, Vereeniging
Hierdie is 'n grysystergietery en vervaardig gietstukke vir ander groepmaatskappye en veral vir die vervaardiging van windpompe.
Finansiële resultate is nadelig getref deur resessietoestande. Ondersoek word tans ingestel met die doel om 'n aanvaarbare opbrengs op aangewende fondse op te lewer..

Salweir bronze centrifugal pump impeller.
Salweir se sentrifugale bronspompstuwer.



Accounting policies

The principal accounting policies of the Group as set out hereunder have in all material respects been consistently followed.

Consolidation principles
The consolidated financial statements incorporate the results and financial position of the company and all its subsidiaries. The results of subsidiaries are included from the dates of acquisition. The net excess cost of shares in subsidiary companies over the net asset values thereof at the date of acquisition, is set-off against share premium.
Assets, liabilities, and the results of foreign subsidiaries are translated at the rates of exchange ruling at the year end. A surplus arising on translation of foreign net assets due to currency realignments is transferred directly to non-distributable reserves.

Foreign currencies
Foreign currencies are converted to South African currency at the appropriate rates ruling at the year end.

Turnover
Turnover is determined from the total net invoiced value of goods, services and delivery charges, allowance being made for credit notes for return of goods or price adjustments. Trade discounts, where applicable, are deducted to arrive at the net invoiced value. Cash discounts are not deducted.

Depreciation
No depreciation is provided on land. Depreciation on other fixed assets is calculated on a straight line basis over the estimated life of the asset concerned.

Leasing charges
The Group's policy is to charge to income the costs of leasing or hiring plant and equipment as they are incurred.

Deferred taxation
Provision is made at current tax rates for the potential tax liability arising from instances in which income and expense items are recognised for tax purposes in different financial periods.

Stock
Raw materials and consumable stores which are valued on a first in first out basis, and merchandise which is valued on an average basis, are adjusted to the lowest of cost, net realisable and replacement values with provision for slow moving, depreciated or redundant stock where applicable.
Finished goods are valued at the lower of cost (which includes raw materials, direct and indirect manufacturing costs) plus delivery charges if in stock at trading outlets, or net realisable value. Work in progress is valued at cost at the appropriate stage of manufacture.
Contracts in progress are valued at actual total cost (materials, wages and direct expenses) less cost of amount invoiced to date, provision being made where necessary for possible future losses. Profit is taken as and when amounts are invoiced to customers and is based on a conservative estimate of the profit to be expected from the contract.

Rekeningkundige beleid

Die hoofbeleidspunte van die Groep soos hieronder uiteengesit, is in alle wesenlike opsigte konsekwent nagekom.

Konsolidasiebeginsels
Die gekonsolideerde finansiële state behels die resultate en finansiële stand van die maatskappy en al sy filiale. Die resultate van die filiale word ingesluit vanaf die datums van verkryging. Die netto koste-oorskot van aandele in filiaal-maatskappye bo die betrokke netto batewaardes op verkrygingsdatum word teen aandelepremie verreken. Bates, laste en die resultate van buitelandse filiale word omgereken teen wisselkoerse wat aan die jaareinde geheers het. 'n Oorskot wat voortspruit uit die omrekening van buitelandse netto bates as gevolg van valutaherskikkings word regstreeks na nie-verdeelbare reserwes oorgedra.

Buitelandse valuta
Buitelandse valuta word tot Suid-Afrikaanse valuta omgereken teen die betrokke koerse wat aan die jaareinde heers.

Omset
Omset word bereken van die totale netto gefaktureerde waarde van goedere, dienste en afleweringskoste, terwyl rekening gehou word met kredietnotas vir terugsending van goedere of prysaansuiwerings. Handelskortings, waar van toepassing, word afgetrek om die netto gefaktureerde waarde te bepaal. Kontantkortings word nie afgetrek nie.

Waardevermindering
Geen waardevermindering word op grond voorsien nie. Waardevermindering op ander vaste bates word bereken op die vastepaaiementbasis oor die beraamde lewensduur van die betrokke bate.

Huurkoste
Die Groepbeleid is om huurkoste t.o.v. aanleg en toerusting teen inkomste te debiteer, wanneer hierdie onkoste aangegaan word.

Uitgestelde belasting
Voorsiening word teen huidige belastingkoerse gemaak vir die potensiële belastingaanspreeklikheid voortspruitend uit gevalle waarin inkomste- en uitgawe-items vir belastingdoeleindes in verskillende finansiële tydperke erken word.

Voorraad
Grondstowwe en verbruiksvoorrade wat op 'n eerste-in, eerste-uit basis gewaardeer word en handelsware wat op 'n gemiddelde basis gewaardeer word, word aangesuiwer tot die laagste van kosprys, netto realiseerbare en vervangingswaardes met voorsiening vir trae, gedepresieerde of oortollige voorraad waar van toepassing.
Klaarprodukte word teen die laagste van kosprys gewaardeer (wat die koste van grondstowwe, regstreekse en onregstreekse vervaardigingskoste insluit) plus afleweringskoste indien in voorraad by handelsafsetpunte, of netto realiseerbare waarde. Goedere onder bewerking word gewaardeer teen kosprys by die betrokke stadium van vervaardiging.
Lopende kontrakte word gewaardeer teen werklike totale koste (grondstowwe, lone en regstreekse koste) min koste van bedrag tot op hede gefaktureer, met die voorsiening, waar nodig, vir moontlike toekomstige verliese. Wins word bereken wanneer bedrae aan klante gefaktureer word en word gebaseer op 'n konserwatiewe beraming van die wins wat uit die kontrak verwag kan word.

Source and application of funds
for the year to 30 September 1975

Bron en aanwending van fondse
vir die jaar tot 30 September 1975

	Company Maatskappy		Group Groep		
	1974 R000	1975 R000	1975 R000	1974 R000	
Source					**Bron**
Operating surplus before taxation	5 014	6 763	21 441	17 873	Bedryfsurplus voor belasting
Depreciation charged against profits	295	400	2 186	2 013	Waardevermindering gedebiteer teen winste
Effect of currency realignments on translation of foreign net assets	4	65	562	4	Effek van valutaherskikkings op omrekening van buitelandse netto bates
Amount received from disposal of fixed assets:					Bedrag ontvang met verkoop van vaste bates:
Land and buildings	135	229	415	169	Grond en geboue
Plant and equipment	15	24	147	144	Aanleg en toerusting
9,2% Unsecured debentures	762	—	—	762	9,2% Onversekerde obligasies
1986/1995 Unsecured debentures	1 230	6 770	6 770	1 230	1986/1995 Onversekerde obligasies
1987/1996 Series A Unsecured debentures issued	—	3 123	3 123	—	1987/1996 Reeks A Onversekerde obligasies uitgereik
1981/1985 Series B Unsecured debentures issued	—	1 500	1 500	—	1981/1985 Reeks B Onversekerde obligasies uitgereik
Increase in long term loans	—	—	663	—	Vermeerdering in langtermynlenings
Increase in outside shareholders' interests			276	—	Vermeerdering in buite-aandeelhouers se belange
Repayment loan portion of taxation	77	—	—	168	Terugbetaling leningsgedeelte van belasting
	7 532	18 874	37 083	22 363	
Application					**Aanwending**
Purchase of fixed assets:					Aankoop van vaste bates:
Land and buildings	693	309	859	2 175	Grond en geboue
Plant and equipment	464	215	2 622	3 079	Aanleg en toerusting
Purchase of shares in subsidiary companies	1 600	4 804			Aankoop van aandele in filiaal-maatskappye
Excess of cost of shares over the net asset value in a subsidiary company at the date of acquisition			292	475	Koste-oorskot van aandele bo die netto batewaarde in 'n filiaalmaatskappy op datum van verkryging
Dividends paid to outside shareholders			288	353	Dividende betaal aan buite-aandeelhouers
Preference dividend	36	36	36	36	Voorkeurdividend
Ordinary dividend	2 926	3 827	3 827	2 926	Gewone dividend
Taxation	246	226	3 385	7 690	Belasting
Increase in loan portion of taxation	2	4	342	180	Toename in leningsgedeelte van belasting
Loan repayments	—	200	237	37	Terugbetalings van lenings
Increase/(Decrease) in net balance with subsidiary companies	(533)	161			Toename/(Afname) in netto saldo met filiaalmaatskappye
Increase/(Decrease) in working capital comprising:	2 098	9 092	20 195	5 412	Toename/(Afname) in bedryfskapitaal bestaande uit:
stock	2 128	(1 135)	7 483	9 109	voorraad
debtors	(487)	835	(675)	5 653	debiteure
short term deposits and loans	—	1 902	4 206	(1 015)	korttermyndeposito's en lenings
cash at call	(3 900)	—	780	(3 910)	opvraagbare kontant
acceptance credits	2 000	—	250	1 750	aksepkrediete
overdraft	329	368	1 728	1 536	oortrekking
cash with bankers	1 655	9 342	6 628	877	kontant by bankiers
taxation owing	341	(226)	1 536	(3 563)	belasting verskuldig
taxation overpaid	206	(206)	(9)	70	belasting oorbetaal
ordinary dividend owing	(675)	(901)	(901)	(675)	gewone dividend verskuldig
creditors	501	(887)	(831)	(4 420)	krediteure
	7 532	18 874	37 083	22 363	

Balansstaat

Balansstaat en gekonsolideerde balansstaat
30 September 1975

	Aantekening	Company Maatskappy		Group Groep	
		1974 R000	1975 R000	1975 R000	1974 R000
Fondse aangewend					
Gewone kapitaal	8	11 255	11 255	11 255	11 255
Aandelepremie—netto	7	7 906	7 637	7 780	8 072
Nie-verdeelbare reserwes	9	1 289	1 442	4 172	3 266
Verdeelbare reserwes	9	24 109	26 783	44 200	35 703
Gewone aandeelhouersfondse		44 559	47 117	67 407	58 296
Voorkeurkapitaal	8	600	600	600	600
Buite-aandeelhouersbelang				4 515	3 959
Langtermynlenings	11	16 030	27 223	28 204	16 405
Bedrag opsygesit vir uitgestelde belasting		—	—	291	152
Totale fondse		61 189	74 940	101 017	79 412
Aanwending van fondse					
Vaste bates	12	5 301	5 260	24 211	23 123
Beleggings	13	—	—	99	99
Filiale	14	44 733	49 429		
Leningsgedeelte van belasting		82	86	1 073	731
Bedryfsbates					
Voorraad	15	8 681	7 546	51 318	43 835
Belasting oorbetaal		206	—	339	348
Debiteure		8 210	9 032	37 144	37 848
Bedrae verskuldig deur medefiliale		14	27	265	236
Korttermyndeposito's en lenings		—	1 902	4 221	15
Saldo's by bankiers en kontant		1 789	11 131	10 664	4 036
Kontant op aanvraag		—	—	780	—
		18 900	29 638	104 731	86 318
Bedryfslaste					
Bankoortrekkings		911	543	124	1 852
Belasting		114	340	4 965	6 501
Aksepkrediete		—	—	—	250
Krediteure		3 874	4 755	20 090	19 293
Bedrae verskuldig aan medefiliale		2	8	91	37
Dividend op gewone aandele		2 926	3 827	3 827	2 926
		7 827	9 473	29 097	30 859
Netto bedryfsbates		11 073	20 165	75 634	55 459
Totale aanwending van fondse		61 189	74 940	101 017	79 412

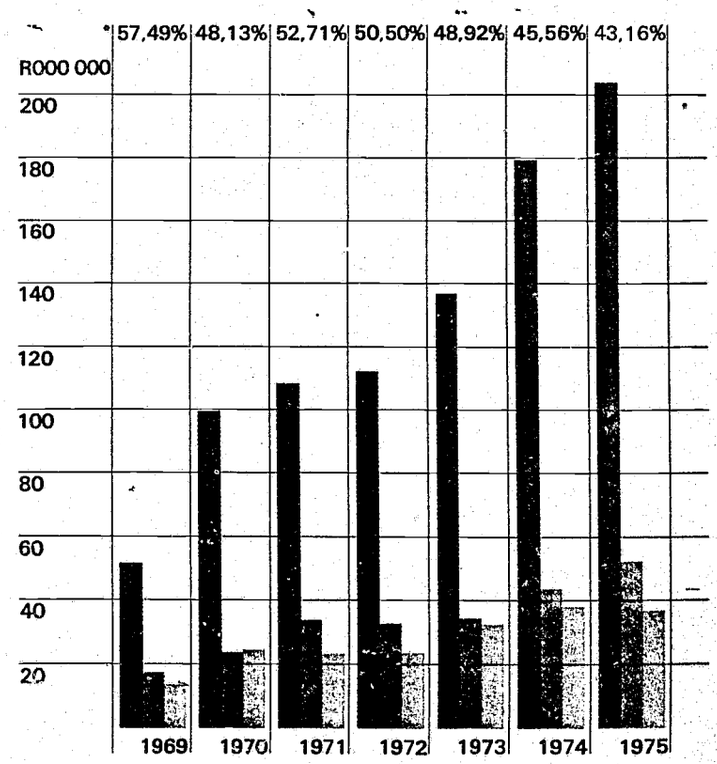
Notes on the financial statements
for the year to 30 September 1975

Aantekeninge by die finansiële state
vir die jaar tot 30 September 1975

	Company Maatskappy		Group Groep		
	1974 R000	1975 R000	1975 R000	1974 R000	
1 Turnover					**1 Omset**
Sales to customers	39 157	43 944	204 967	179 265	Verkope aan klante
Sales to subsidiaries	580	658			Verkope aan filiale
	39 737	44 602	204 967	179 265	
% Increase compared with previous year			14,34%	30,90%	%-toename vergeleke met vorige jaar
2 Exceptional expenses					**2 Buitengewone uitgawes**
Share and debenture issue expenses	103	124	129	103	Aandeel- en obligasie-uitgifte-onkoste
Expenses incurred on the removal and reinstallation of plant and machinery	—	391	391	12	Onkoste aangegaan met die verwydering en herinstallering van aanleg en masjinerie
	103	515	520	115	
3 Taxation					**3 Belasting**
South African normal and foreign	127	62	8 188	7 374	Suid-Afrikaanse gewone en buitelandse
Withholding tax on foreign dividends	114	217	217	217	Teruggehoue belasting op buitelandse dividende
Deferred	—	—	116	75	Uitgestelde
Adjustment in respect of prior years	5	(53)	1	99	Aanpassing ten opsigte van vorige jare
	246	226	8 524	7 765	
4 Auditors' remuneration					**4 Ouditeursvergoeding**
Audit fees, including under provisions in prior years	33	65	253	164	Ouditgelde, insluitende ondervoorsienings in vorige jare
Other fees	—	—	4	3	Ander gelde
Expenses	—	—	1	2	Onkoste
	33	65	258	169	
5 Directors' emoluments					**5 Direkteursvergoeding**
The remuneration of the directors of the company for the year was:					Die vergoeding van die direkteure van die maatskappy vir die jaar was:
For services as directors	42	42			Vir dienste as direkteure
For other services	108	156			Vir ander dienste
	150	198			

Stocks and debtors supporting Group sales

Voorrade en skuldenaars wat Groepverkope onderhou



*Percentage to sales
*Persentasie aan verkope

Sales
Verkope

Stocks
Voorrade

Debtors
Skuldenaars

	Company Maatskappy		Group Groep		
	1974 R000	1975 R000	1975 R000	1974 R000	
6 Directors' pensions					**6 Pensioene aan direkteure**
The aggregate amount of pensions paid to directors and past directors for the year was:					Die totale bedrag van pensioene gedurende die jaar betaal aan direkteure en oud-direkteure was:
For other services	11	19			Vir ander dienste
7 Share premium					**7 Aandelepremie**
Share premium	14 210	14 210	14 210	14 210	Aandelepremie
Deduct: Net excess cost of shares in subsidiary companies over the net asset values thereof at the date of acquisition	(5 829)	(6 304)	(6 138)	(5 663)	*Min:* Netto koste-oorskot van aandele in filiaalmaatskappye bo hul netto batewaardes op datum van verkryging
Amount arising from acquisition during the year	(475)	(269)	(292)	(475)	Bedrag voortspruitend uit verkryging gedurende die jaar
	7 906	7 637	7 780	8 072	

8 Share capital

(a) Ordinary

The authorised ordinary share capital is R15 000 000 (1974: R15 000 000) comprising 30 000 000 (1974: 30 000 000) shares of 50 cents each of which 22 510 533 (1974: 22 510 533) have been issued fully paid giving an issued capital of R11 255 266 (1974: R11 255 266).

The unissued shares may be issued by the directors at their discretion. The authority was given at the Annual General Meeting held on 28 February 1975 and remains in force until the next Annual General Meeting.

(b) Preference

The authorised, issued and fully paid preference share capital is R600 000 comprising 300 000 6 per cent first cumulative shares of R2 each.

8 Aandelekapitaal

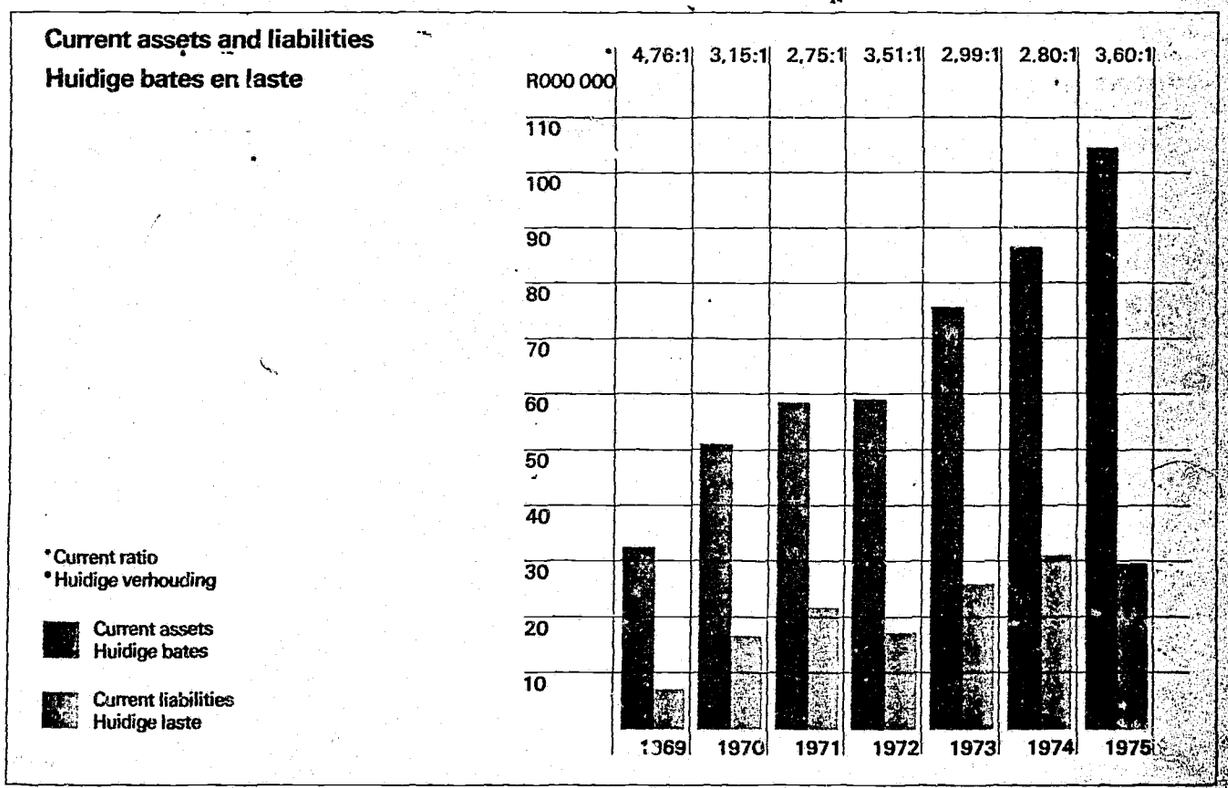
(a) Gewone

Die gemagtigde gewone aandelekapitaal is R15 000 000 (1974: R15 000 000) bestaande uit 30 000 000 (1974: 30 000 000) aandele van 50 sent elk, waarvan 22 510 533 (1974: 22 510 533) uitgereik en volopbetaald is, wat 'n uitgereikte kapitaal van R11 255 266 (1974: R11 255 266) gee.

Die onuitgereikte aandele mag deur die direkteure na goeddunke uitgereik word. Dié magtiging is by die Algemene Jaarvergadering gehou op 28 Februarie 1975 verleen en bly tot die volgende Algemene Jaarvergadering van krag.

(b) Voorkeur

Die gemagtigde, uitgereikte en volopbetaalde voorkeuraandele-kapitaal bedra R600 000 bestaande uit 300 000 6 persent eerste kumulatiewe aandele van R2 elk.



	Company Maatskappy		Group Groep		
		R000	R000		
9 Reserves				**9 Reserwes**	
Non-distributable reserves				**Nie-verdeelbare reserwes**	
Balance at beginning of the year		1 289	3 266	Saldo aan begin van die jaar	
Deduct: Reclassification on rationalization of Rhodesian operations			(94)	*Min:* Herklassifikasie met rasionalisasie van Rhodesiese bedrywighede	
Add: Surplus arising on disposal during the year of fixed assets		88	166	*Plus:* Oorskot voortspruitend uit verkoop van vaste bates gedurende die jaar	
Add: Surplus arising during the year on translation of foreign net assets due to currency realignments		65	702	*Plus:* Oorskot voortspruitend gedurende die jaar uit omrekening van buitelandse netto bates vanweë valutaherskikkings	
Add: Amount arising on rationalization of Rhodesian operations:				*Plus:* Bedrag voortspruitend uit rasionalisasie van Rhodesiese bedrywighede:	
Capital surplus arising on disposal of fixed assets			208	Kapitaaloorskot voortspruitend uit verkoop van vaste bates	
Adjustment in respect of prior year			(107)	Aansuiwering t.o.v. vorige jare	
Reclassified from surplus arising on translation of foreign net assets due to currency realignments			31	Herklassifiseer van oorskot voortspruitend uit omrekening van buitelandse netto bates vanweë valutaherskikkings	
		1 442	4 172		
	1974 R000	1975 R000	1975 R000	1974 R000	
Comprising:					Bestaande uit:
Bonus shares issued by subsidiaries and written off by holding company	—	—	540	540	Bonusaandele deur filiale uitgereik en afgeskryf deur houermaatskappy
Capital surplus arising on disposal of fixed assets	1 198	1 286	1 652	1 404	Kapitaaloorskot voortspruitend uit verkoop van vaste bates
Surplus arising on translation of foreign net assets due to currency realignments	91	156	1 063	392	Oorskot voortspruitend uit omrekening van buitelandse netto bates as gevolg van valutaherskikkings
Amount arising on rationalisation of Rhodesian operations	—	—	864	877	Bedrag voortspruitend uit rasionalisasie van Rhodesiese bedrywighede
Surplus on revaluation of land and buildings	—	—	53	53	Oorskot met herwaardasie van grond en geboue
	1 289	1 442	4 172	3 266	
Distributable reserves					Verdeelbare reserwes
General reserve	18 490	19 761	26 401	19 310	Algemene reserwe
Add: Transfer during the year	—	—	6 000	6 000	*Plus:* Oordrag gedurende die jaar
Add: Transfer from non-distributable reserves	1 271	—	—	1 271	*Plus:* Oordrag vanaf nie-verdeelbare reserwes
Deduct: Amount relating to rationalisation of Rhodesian operations	—	—	—	(180)	*Min:* Bedrag t.o.v. rasionalisasie van Rhodesiese bedrywighede
	19 761	19 761	32 401	26 401	
Retained income	4 348	7 022	11 799	9 302	Inkomste behou
	24 109	26 783	44 200	35 703	

Company Maatskappy		Group Groep		
1974 R000	1975 R000	1975 R000	1974 R000	
10 Capital commitments				**10 Kapitaalverpligtinge**
Commitments in respect of contracts	274	51	1 358	1 985	Verpligtinge t.o.v. kontrakte
Balance of schemes authorised by the directors	554	354	614	2 741	Saldo van skemas deur die direkteure gemagtig
Total unexpended authorisations	828	405	1 972	4 726	Totale onbestede magtigings
Funds to meet this expenditure will be provided from working capital and funds received from debenture issue					Fondse om hierdie uitgawe te dek, sal voorsien word uit bedryfskapitaal en fondse wat van obligasie-uitgifte ontvang is
11 Long term borrowings					**11 Langtermynlenings**
6,75% Loan stock 1971/1985 (repayable in ten equal annual instalments on 30 September)	—	—	337	370	6,75% Leningseffekte 1971/1985 (terugbetaalbaar in tien gelyke jaarlikse paaiemente op 30 September)
7,5% Unsecured loan stock 1975/1984 (redeemable in nine equal annual instalments on 30 June)	2 000	1 800	1 800	2 000	7,5% Onversekerde leningseffekte 1975/1984 (aflosbaar in nege gelyke jaarlikse paaiemente op 30 Junie)
9,2% Unsecured debentures 1984/1998 (redeemable in fifteen equal annual instalments commencing March 1984)	10 000	10 000	10 000	10 000	9,2% Onversekerde obligasies 1984/1998 (aflosbaar in vyftien gelyke jaarlikse paaiemente vanaf Maart 1984)
10,25% Unsecured debentures 1982/1991 (redeemable in ten equal annual instalments commencing March 1982)	3 000	3 000	3 000	3 000	10,25% Onversekerde obligasies 1982/1991 (aflosbaar in tien gelyke jaarlikse paaiemente vanaf Maart 1982)
1986/1995 Unsecured debentures (redeemable in ten equal annual instalments commencing March 1986) comprising:					1986/1995 Onversekerde obligasies (aflosbaar in tien gelyke jaarlikse paaiemente vanaf Maart 1986) bestaande uit:
3 491 000 Series A bearing interest at 11,75% and	551	3 491	3 491	551	3 491 000 Reeks A wat rente dra teen 11,75% en
4 509 000 Series B bearing interest at 1,75% above the minimum commercial bank rate, subject to a minimum of 10,5% and a maximum of 14%	679	4 509	4 509	679	4 509 000 Reeks B wat rente dra teen 1,75% bo die minimum kommersiële bankkoers onderhewig aan 'n minimum van 10,5% en 'n maksimum van 14%
Unsecured debentures issued at par, to be fully paid by 17 December 1976, comprising:					Onversekerde obligasies teen bestaande pari-waarde ten volle opbetaal op 17 Desember 1976:
5 395 000 Series A 1987/1996 bearing interest at 13,375% (redeemable in ten equal annual instalments commencing December 1987) and	—	3 123	3 123	—	5 395 000 Reeks A 1987/1996 wat rente dra teen 13,375% (aflosbaar in tien gelyke jaarlikse paaiemente vanaf Desember 1987) en
2 605 000 Series B 1981/1985 bearing interest at 13,125% (redeemable in five equal annual instalments commencing December 1981)	—	1 500	1 500	—	2 605 000 Reeks B 1981/1985 wat rente dra teen 13,125% (aflosbaar in vyf gelyke jaarlikse paaiemente vanaf Desember 1981)
Loan bearing interest at 7% per annum and repayable in 8 half yearly instalments of R58 000	—	—	463	—	Lening wat rente dra teen 7% per jaar en terugbetaalbaar is in 8 halfjaarlikse paaiemente van R58 000
Loan repayable not later than 30 September 1976. Interest calculated at prime bank rates applicable from time to time	—	—	13	13	Lening terugbetaalbaar voor 30 September 1976. Rente bereken teen prima bankkoerse wat van tyd tot tyd van toepassing is
Loan bearing interest at 3% per annum repayable in half yearly instalments of R1 815 over the period ending 31 December 1981	—	—	21	25	Lening teen 'n rentekoers van 3% per jaar, terugbetaalbaar in halfjaarlikse paaiemente van R1 815 oor die tydperk eindigende 31 Desember 1981
Loan bearing interest at 5,5% per annum until 1980, thereafter at 0,5% below the prime bank overdraft rate. Repayable in monthly instalments of R4 200 commencing 1st October 1976	—	—	200	—	Lening wat rente dra teen 5,5% per jaar tot 1980, daarna teen 0,5% onder prima-bankoortrekkingskoers. Terugbetaalbaar in maandelikse paaiemente van R4 200 vanaf 1 Oktober 1976
Current portion of long term borrowings included in creditors	(200)	(200)	(253)	(233)	Huidige gedeelte van langtermynlenings ingesluit by krediteure
	16 030	27 223	28 204	16 405	

	Company Maatskappy			Group Groep			
	Book value Boek-waarde R000	Depreciation Waarde-vermindering R000	Cost or valuation Kosprys of waardasie R000	Cost or valuation Kosprys of waardasie R000	Depreciation Waarde-vermindering R000	Book value Boek-waarde R000	
12 Fixed assets							**12 Vaste bates**
1974							1974
Freehold land and buildings	2 881	2 116	4 997	15 561	4 041	11 520	Vrypaggrond en geboue
Leasehold premises	609	399	1 008	1 081	445	636	Huurpagpersele
Plant and equipment	1 315	1 650	2 965	25 555	15 918	9 637	Aanleg en toerusting
Capital work in progress	496	—	496	1 330	—	1 330	Lopende kapitale werke
	5 301	4 165	9 466	43 527	20 404	23 123	
1975							**1975**
Freehold land and buildings	**3 375**	**2 163**	**5 538**	**16 624**	**4 054**	**12 570**	Vrypaggrond en geboue
Leasehold premises	**529**	**539**	**1 068**	**1 146**	**596**	**550**	Huurpagpersele
Plant and equipment	**1 293**	**1 831**	**3 124**	**28 207**	**17 852**	**10 355**	Aanleg en toerusting
Capital work in progress	**63**	—	**63**	**736**	—	**736**	Lopende kapitale werke
	5 260	**4 533**	**9 793**	**46 713**	**22 502**	**24 211**	

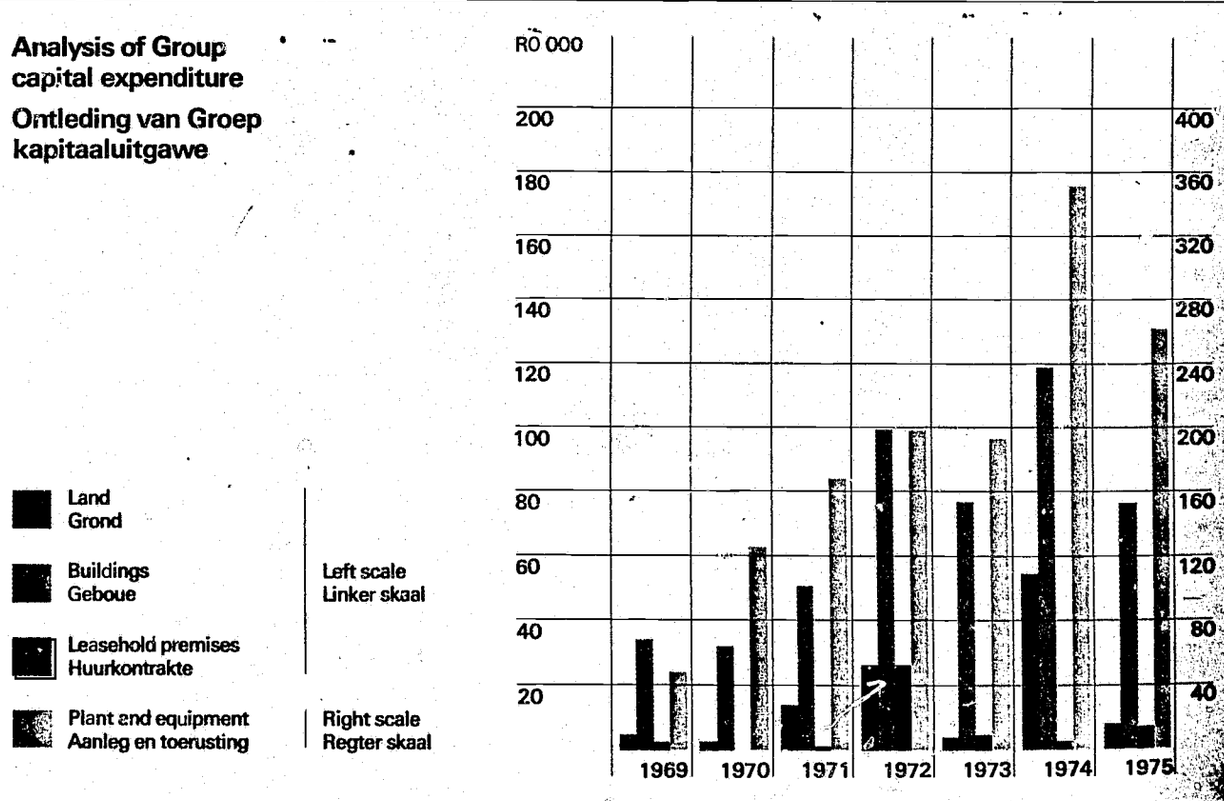
A register of freehold land and buildings and leasehold premises is kept at the registered office of the company and may be inspected by members or their duly authorised agent

'n Register van vrypaggrond en geboue en huurpagpersele word in die geregistreerde kantoor van die maatskappy gehou waar dit deur lede of hul behoorlik gemagtigde agente besigtig mag word

	Company Maatskappy		Group Groep		
	1974 R000	**1975 R000**	**1975 R000**	1974 R000	
13 Investments					**13 Beleggings**
Unlisted					Ongenoteer
80 000 Ordinary shares of R1 each in Vivian-Saunders (Pty) Limited, and 30 000 Ordinary shares at R1 each in Vivian-Regina (Pty) Limited					80 000 Gewone aandele van R1 elk in Vivian-Saunders (Pty) Limited, en 30 000 Gewone aandele van R1 elk in Vivian-Regina (Pty) Limited
At cost less amount written off Directors' valuation R391 000 (1974: R465 000)	—	—	**99**	99	Teen kosprys min bedrae afgeskryf Direkteurswaardasie R391 000 (1974: R465 000)
	—	—	**99**	99	

Analysis of Group capital expenditure

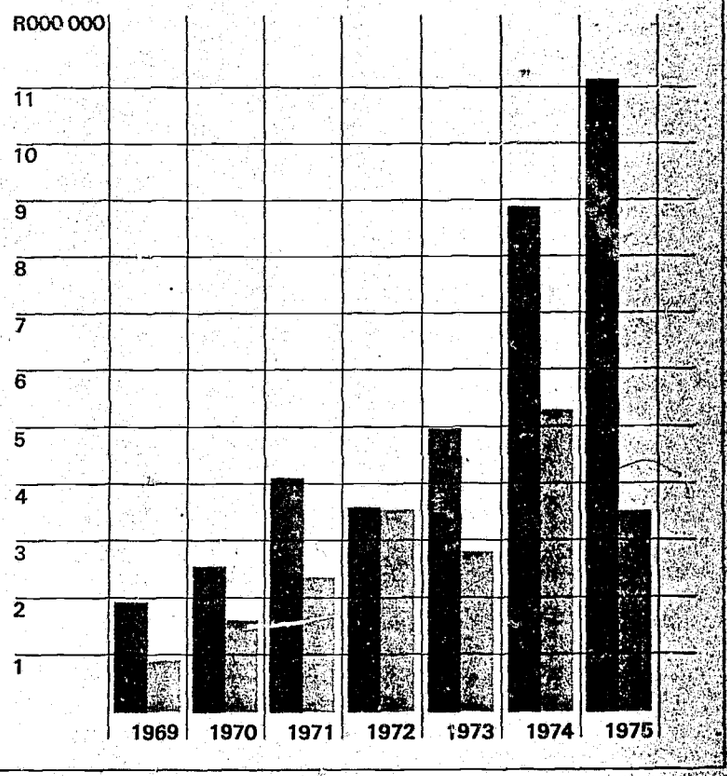
Ontleding van Groep kapitaaluitgawe



	Company Maatskappy		Group Groep		
	1974	1975	1975	1974	
	R000	R000	R000	R000	
14 Subsidiaries					**14 Filiale**
Shares at cost including nominal value of bonus shares received *less* amounts written off	33 753	38 557			Aandele teen kosprys insluitende nominale waarde van bonusaandele ontvang *min* bedrae afgeskryf
Amounts owing by subsidiaries *less* provision for loss	19 095	22 172			Bedrae deur filiale verskuldig *min* voorsiening vir verlies
	52 848	60 729			
Deduct: Amounts owing to subsidiaries	1 811	4 727			*Min:* Bedrae aan filiale verskuldig
	51 037	56 002			
Deduct: Portion thereof representing the net excess cost of shares over the net asset values at date of acquisition	6 304	6 573			*Min:* Gedeelte daarvan verteenwoordigende die netto koste-oorskot van aandele bo die netto batewaardes op datum van verkryging
	44 733	49 429			
15 Stock					**15 Voorraad**
Raw materials (including component parts)	1 487	1 292	11 176	8 257	Grondstowwe (insluitende bestanddele)
Finished goods and merchandise	6 659	5 772	28 586	23 938	Klaarprodukte en handelsware
Consumable stores (including tools and spares)	—	—	2 168	2 300	Verbruiksvoorrade (insluitende gereedskap en onderdele)
Work in progress	398	321	8 206	8 400	Lopende werk
Contracts in progress	137	161	1 182	940	Lopende kontrakte
	8 681	7 546	51 318	43 835	
16 Contingent liabilities					**16 Voorwaardelike aanspreeklikhede**
Commercial contract and other guarantees	—	—	201	—	Handelskontrak en ander waarborge
Guarantees for housing loans from building societies and others to employees	308	449	486	333	Waarborge vir huislenings aan werknemers deur bouverenigings en andere
Guarantees of bank overdrafts of subsidiary companies	625	1 064			Waarborge van bankoortrekkings van filiaalmaatskappye
	933	1 513	687	333	

Capital expenditure versus income retained and depreciation

Kapitaaluitgawe teenoor behoue inkomste en waardevermindering



Interests in subsidiaries

Nature of business See note	Name of subsidiary	Incorporated in	Issued capital		Ord %
			Ord. R	Pref. R	
1	Stewarts & Lloyds of South West Africa Limited	South West Africa	160 000		100
1	Stewarts & Lloyds (Malawi) Limited	Malawi	MK110 000		100
2	Tubemakers of South Africa Limited	South Africa	6 983 976		100
3	Tube & Pipe Industries (Pty) Limited	South Africa	200		100
4	Eagle Tube Company (Pty) Limited	South Africa	690 000		100
4	Salsa Properties Vereeniging (Pty) Limited	South Africa	1 000		100
5	African Malleable Foundries Limited	South Africa	450 000		100
6	Vosa Valves (Pty) Limited	South Africa	400 000		100
	which is the holding company of:				
24	Vosa Valves Incorporated	U.S.A.	US$1 000		100
††7	Salweir (Pty) Limited	South Africa	300 000		60
8	Maksal Tubes (Pty) Limited	South Africa	3 750 000		50
	which is the holding company of:				
12	Capillary Tubes (Pty) Limited	South Africa	5 000		50
*9	Bundy Tubing Co. of South Africa (Pty) Limited	South Africa	865 100		50
¶10	Pipe Couplings (Pty) Limited	South Africa	250 000		
	which is the holding company of:				
4	Samal Investments (Pty) Limited	South Africa	6		100
1	Stewarts & Lloyds of Rhodesia Limited	Rhodesia	R$1 900 000		100
	which is the holding company of:				
11	Tubemakers of Rhodesia Limited	Rhodesia	R$2 000		100
23	J. H. Vivian & Wilfred Watson (Pvt) Limited	Rhodesia	R$200 000		100
21	Baldwins (Rhodesia) (Pvt) Limited	Rhodesia	R$30 001		100
4	Scottish Tube Company of South Africa Limited	South Africa	480 000		100
	which is the holding company of:				
4	Salsa Properties (Germiston) (Pty) Limited	South Africa	1 000		100
4	Salsa Properties (Pietermaritzburg) (Pty) Limited	South Africa	1 000		100
4	Salsa Properties (Randburg) (Pty) Limited	South Africa	1 000		100
4	Salsa Properties (Pietersburg) (Pty) Limited	South Africa	4		100
4	Salsa Properties (George) (Pty) Limited	South Africa	1 000		100
4	Salsa Properties (Algoa Bay) (Pty) Limited	South Africa	20 000		100
4	Salsa Properties (Berg Street, Pietermaritzburg) (Pty) Ltd.	South Africa	4		100
13	H. Incledon & Co. (South Africa) Limited	South Africa	2 250 000		
	which is the holding company of:				
14	H. Incledon & Co. (Central Africa) Limited	Rhodesia	R$8 000		
15	Weiser Lock Co. (South Africa) (Pty) Limited	South Africa	1 000		
16	J. H. Vivian & Company Limited	South Africa	1 035 000	300 000	
	which is the holding company of:				
††25	Plasal (Pty) Limited	South Africa	2		
††18	J. K. Fulton (Pty) Limited	South Africa	150 000		
19	Vivian-Colt (Pty) Limited	South Africa	45 000		
20	J. H. Vivian Mining Company (Pty) Limited	South Africa	20 000		
4	J. K. Fulton Investments (Pty) Limited	South Africa	2		
4	J. H. Vivian Holdings (Pty) Limited	South Africa	2 000	48 000	
21	Baldwins Lim	South Africa	800 000		
	which is the holding company of:				
22	Baldwins (Alloy Steels) (Pty) Limited	South Africa	200		
23	Anderson Hardware (Pty) Limited	South Africa	48 000	104 600	
††25	S & L (Pty) Limited	South Africa	100		
17	J & C Malleable (Pty) Limited	South Africa	400 000		
	which is the holding company of:				
4	J & C Malleable Properties (Pty) Limited	South Africa	4		
25	Enterprise Engineering (Pty) Limited	South Africa	8 000		
25	S.A. Chain Belt Company (Pty) Limited	South Africa	4		
§5	R.M.C. Foundry (1959) S.A. (Pty) Limited	South Africa	2 000		
†24	Salvalve (Pty) Limited	South Africa	1 000		

Changes during the year

†This subsidiary was incorporated during the year and changed its name from Stewlloyd Valve Sales (Pty) Limited.

§Subsidiary acquired during the year.

¶This company increased its issued capital by R200 000.

*Authorised capital increased by R500 000 and issued capital increased by R500 009.

††These companies changed their names—see report of directors.

agricultural discs and earthmoving parts, copper wire and aluminium overhead

Nature of business

Percentage holding		Book value of company's holding in shares		Amounts owing to (by) main holding company	
Ord. %	Pref. %	1974 R000	1975 R000	1974 R000	1975 R000
100		—	—	(515)	(269)
100		148	148	118	291
100		6 984	6 984	5 645	10 641
100		3 778	3 778	275	461
100		1 055	1 055	(528)	(524)
100		1	1	200	194
100		1 125	1 125	2 144	1 881
100		707	707	642	1 221
100				—	—
60		523	523	2	243
50		1 875	1 875	(26)	(55)
50				—	—
55		186	476	414	42
51		26	128	217	86
100				—	—
100		1 000	5 163	1 901	2 088
100				—	—
60				30	57
100				50	149
100		100	100	(578)	(600)
100				167	165
100				16	15
100				195	200
100				44	46
100				31	31
100				80	75
100				30	35
100		3 652	3 652	2 613	1 094
100				22	51
100				100	78
100	100	5 465	5 465	884	(887)
100				—	1
100				909	565
100				400	598
100				[illegible]	976
100				226	253
100	100			57	58
100		5 301	5 301	(164)	(2 391)
100				304	368
100	100	204	204	395	163
100		—	—	—	—
100		1 623	1 623	297	16
100				—	—
100				—	—
100				—	—
100			248		30
100			1		(1)
		33 753	38 557	19 095	22 172
				(1 811)	(4 727)
		33 753	38 557	17 284	17 445

1 Distributors of seamless and welded steel tubes, copper and plastic tube, pipe fittings, pumps, valves, engines, windmills and irrigation equipment.
2 Manufacturers and distributors of seamless and welded steel tubes, stainless steel tubes, pipe fittings, hollow section and steel structures.
3 Distributors of seamless and welded steel tubes and pipe fittings.
4 Property owning companies.
5 Manufacturers and distributors of malleable pipe fittings.
6 Manufacturers and distributors of valves.
7 Manufacturers and distributors of pumps.
8 Manufacturers and distributors of copper and brass tube.
9 Manufacturers and distributors of Bundy tube.
10 Manufacturers and distributors of pipe couplings.
11 Manufacturers and distributors of seamless steel tubes and fabricated structures.
12 Manufacturers and distributors of capillary tubing.
13 Distributors of seamless and welded steel tubes, pipe fittings, valves and sanitaryware.
14 Distributors of valves, pipes and fittings.
15 Assemblers and distributors of Weiser locks.
16 Distributors of Saunders valves, transmission products, Gulf lubricants, mechanical rubber goods, jointing and packing products.
17 Malleable and grey iron foundry.
18 Manufacturers and distributors of hoists, winches and penstocks.
19 Manufacturers and distributors of Colt ventilation systems and sheet metal products.
20 Manufacturers and distributors of mining and industrial equipment.
21 Distributors of mild steel sections, flat rolled products, corrugated iron and stainless steel.
22 Distributors of alloy steels. Heat treatment of metals, beater bars and special steels.
23 Tools, hardware and paint merchants.
24 Distributors of valves.
25 Dormant.

Holding Company's interest in results of subsidiaries

	1974 R000	1975 R000
Results after taxation:		
Aggregate profits	9 707	13 436
Aggregate losses	466	567

Belange in filiale

Aard van werksaamhede Kyk opmerking	Naam van filiaal	Ingelyf in	Uitgereikte kapitaal		Gev
			Gew. R	Voork. R	
1	Stewarts & Lloyds of South West Africa Limited	Suidwes-Afrika	160 000		10
1	Stewarts & Lloyds (Malawi) Limited	Malawi	MK110 000		10
2	Tubemakers of South Africa Limited	Suid-Afrika	6 983 976		10
3	Tube & Pipe Industries (Pty) Limited	Suid-Afrika	200		10
4	Eagle Tube Company (Pty) Limited	Suid-Afrika	690 000		10
4	Salsa Properties Vereeniging (Pty) Limited	Suid-Afrika	1 000		0
5	African Malleable Foundries Limited	Suid-Afrika	450 000		10
6	Vosa Valves (Pty) Limited	Suid-Afrika	400 000		10
	wat die houermaatskappy is van:				
24	Vosa Valves Incorporated	V.S.A.	US$1 000		0
††7	Salweir (Pty) Limited	Suid-Afrika	300 000		
8	Maksal Tubes (Pty) Limited	Suid-Afrika	3 750 000		
	wat die houermaatskappy is van:				
12	Capillary Tubes (Pty) Limited	Suid-Afrika	5 000		
*9	Bundy Tubing Co. of South Africa (Pty) Limited	Suid-Afrika	865 100		
¶10	Pipe Couplings (Pty) Limited	Suid-Afrika	250 000		
	wat die houermaatskappy is van:				
4	Samal Investments (Pty) Limited	Suid-Afrika	6		
1	Stewarts & Lloyds of Rhodesia Limited	Rhodesië	R$1 900 000		
	wat die houermaatskappy is van:				
11	Tubemakers of Rhodesia Limited	Rhodesië	R$2 000		
23	J. H. Vivian & Wilfrid Watson (Pvt) Limited	Rhodesië	R$200 000		
21	Baldwins (Rhodesia) (Pvt) Limited	Rhodesië	R$30 001		
4	Scottish Tube Company of South Africa Limited	Suid-Afrika	480 000		
	wat die houermaatskappy is van:				
4	Salsa Properties (Germiston) (Pty) Limited	Suid-Afrika	1 000		
4	Salsa Properties (Pietermaritzburg) (Pty) Limited	Suid-Afrika	1 000		
4	Salsa Properties (Randburg) (Pty) Limited	Suid-Afrika	1 000		
4	Salsa Properties (Pietersburg) (Pty) Limited	Suid-Afrika	4		
4	Salsa Properties (George) (Pty) Limited	Suid-Afrika	1 000		
4	Salsa Properties (Algoa Bay) (Pty) Limited	Suid-Afrika	20 000		
4	Salsa Properties (Berg Street, Pietermaritzburg) (Pty) Ltd.	Suid-Afrika	4		
13	H. Incledon & Co. (South Africa) Limited	Suid-Afrika	2 250 000		
	wat die houermaatskappy is van:				
14	H. Incledon & Co. (Central Africa) Limited	Rhodesië	R$8 000		
15	Weiser Lock Co. (South Africa) (Pty) Limited	Suid-Afrika	1 000		
16	J. H. Vivian & Company Limited	Suid-Afrika	1 035 000	300 000	
	wat die houermaatskappy is van:				
††25	Plasal (Pty) Limited	Suid-Afrika	2		
††18	J. K. Fulton (Pty) Limited	Suid-Afrika	150 000		
19	Vivian-Colt (Pty) Limited	Suid-Afrika	45 000		
20	J. H. Vivian Mining Company (Pty) Limited	Suid-Afrika	20 000		
4	J. K. Fulton Investments (Pty) Limited	Suid-Afrika	2		
4	J. H. Vivian Holdings (Pty) Limited	Suid-Afrika	2 000	48 000	
21	Baldwins Limited	Suid-Afrika	800 000		
	wat die houermaatskappy is van:				
22	Baldwins (Alloy Steels) (Pty) Limited	Suid-Afrika	200		
23	Anderson Hardware (Pty) Limited	Suid-Afrika	48 000	104 60	
††25	S & L (Pty) Limited	Suid-Afrika	100		
17	J & C Malleable (Pty) Limited	Suid-Afrika	400 000		
	wat die houermaatskappy is van:				
4	J & C Malleable Properties (Pty) Limited	Suid-Afrika	4		
25	Enterprise Engineering (Pty) Limited	Suid-Afrika	8 000		
25	S.A. Chain Belt Company (Pty) Limited	Suid-Afrika	4		
§5	R.M.C. Foundry (1959) S.A. (Pty) Limited	Suid-Afrika	2 000		
†24	Salvalve (Pty) Limited	Suid-Afrika	1 000		

Veranderinge gedurende die jaar

† Hierdie filiaal is gedurende die jaar ingelyf en die naam verander van Stewlloyd Valve Sales (Pty) Limited.

§ Filiaal gedurende die jaar verkry.

¶ Hierdie maatskappy het sy uitgereikte kapitaal met R200 000 vermeerder.

* Gemagtigde kapitaal het vermeerder met R500 000 en uitgereikte kapitaal het vermeerder met R500 009.

†† Hierdie maatskappye het hul name verander—sien direkteursverslag.

Prof. P. W. Hoek

Aard van besigheid

Persentasie besit		Boekwaarde van maatskappy se aandelebesit		Bedrae verskuldig aan (deur) hoof houermaatskappy	
Gew. %	Voork. %	1974 R000	1975 R000	1974 R000	1975 R000
100		—	—	(515)	(269)
100		148	148	118	291
100		6 984	6 984	5 645	10 641
100		3 778	3 778	275	461
100		1 055	1 055	(528)	(524)
100		1	1	200	194
100		1 125	1 125	2 144	1 881
100		707	707	642	1 221
100				—	—
60		523	523	2	243
50		1 875	1 875	(26)	(55)
50				—	—
55		186	476	414	42
51		26	128	217	86
100				—	—
100		1 000	5 163	1 901	2 088
100				—	—
60				30	57
100				50	149
100		100	100	(578)	(600)
100				167	165
100				16	15
100				195	200
100				44	46
100				31	31
100				80	75
100				30	35
100		3 652	3 652	2 613	1 094
100				22	51
100				100	78
100	100	5 465	5 465	884	(887)
100				—	1
100				909	565
100				400	598
100				687	976
100				226	253
100	100			57	58
100		5 301	5 301	(164)	(2 391)
100				304	368
100	100	204	204	395	163
100		—	—	—	—
100		1 623	1 623	297	16
100				—	—
100				—	—
100				—	—
100			248		30
100			1		(1)
		33 753	38 557	19 095	22 172
				(1 811)	(4 727)
		33 753	38 557	17 284	17 445

1 Verspreiders van naatlose en gesweiste staalpype, koper- en plastiekpyp, pyptoebehore, pompe, kleppe, enjins, windpompe en besproeiingstoerusting.
2 Vervaardigers en verspreiders van naatlose en gesweiste staalpype, vlekvrye staalpype, pyptoebehore, holseksies en staalstrukture.
3 Verspreiders van naatlose en gesweiste staalpype en pyptoebehore.
4 Eiendomsbesittende maatskappye.
5 Vervaardigers en verspreiders van smeebareyster-toebehore.
6 Vervaardigers en verspreiders van kleppe.
7 Vervaardigers en verspreiders van pompe.
8 Vervaardigers en verspreiders van koper- en bronspyp.
9 Vervaardigers en verspreiders van Bundy-pyp.
10 Vervaardigers en verspreiders van pypkoppelings.
11 Vervaardigers en verspreiders van naatlose staalpype en vervaardigde strukture.
12 Vervaardigers en verspreiders van haarbuis.
13 Verspreiders van naatlose en gesweiste staalpype, pyptoebehore, kleppe en sanitêre ware.
14 Verspreiders van kleppe, pype en toebehore.
15 Monteerders en verspreiders van Weiser-slotte.
16 Verspreiders van Saunders-kleppe, transmissieprodukte, Gulf-smeermiddels, meganiese rubbergoedere, las- en verpakkingsprodukte.
17 Smeebare- en grysyster-gietery.
18 Vervaardigers en verspreiders van hysers, wenasse en sluiskleppe.
19 Vervaardigers en verspreiders van Colt-belugtingstelsels en plaatmetaalprodukte.
20 Vervaardigers en verspreiders van myn- en nywerheids-toerusting.
21 Verspreiders van weekstaalseksies, gewalste platprodukte, sinkplaat, en vlekvrye staal.
22 Verspreiders van allooistaalsoorte. Hittebehandeling van metale, kloppikstawe en spesiale staalsoorte.
23 Gereedskap, ysterware en verfhandelaars.
24 Verspreiders van kleppe.
25 Rustend.

Houermaatskappy se belang in resultate van filiale

	1974 R000	1975 R000
Resultate na belasting:		
Totale winste	9 707	13 436
Totale verliese	466	567

Statement of Group results and financial position adjusted for the effect of inflation

As a consequence of inflation the figures in the Group's historical financial statements, (which are expressed in rand of varying purchasing power), do not show the present day purchasing power of the ordinary shareholders' investment or the inflationary effect on the Group results for the year.
A statement has been prepared which shows the estimated effect of the change in the purchasing power of money on the items comprising the ordinary shareholders' investment as at 30 September 1975 by adjusting these figures to the rand of current purchasing power (C.P.P.) at that date by applying conversion factors derived from the Consumer Price Index. A comparison of this adjusted ordinary shareholders' investment, revised for any extraneous items arising during the year, with the 1974 figures similarly adjusted to the purchasing power of the rand at 30 September 1975 reflects the C.P.P. retained income for the year, and thereby the effect of inflation on the results (Note 2)

Staat van resultate en finansiële stand van die Groep soos aangepas vir die uitwerking van inflasie

As gevolg van inflasie toon die syfers in die historiese finansiële state van die Groep (wat uitgedruk is in rand van wisselende koopkrag) nie die huidige koopkrag van die gewone aandeelhouersbelegging of die inflasionêre uitwerking op die Groepresultate vir die jaar nie.
'n Staat is dus voorberei wat die beraamde uitwerking toon van die verandering in die koopkrag van geld op die items wat die gewone aandeelhouersbelegging op 30 September 1975 behels deur die aanpassing van hierdie syfers tot die rand van huidige koopkrag (H.K.K.) op daardie datum. Hierdie aanpassing geskied deur die toepassing van omrekeningsfaktore wat vanaf die Verbruikersprysindeks verkry is. 'n Vergelyking van hierdie aangepaste gewone aandeelhouersbelegging, wat hersien is t.o.v. enige buitengewone items wat gedurende die jaar ontstaan het, met die 1974 syfers op soortgelyke wyse aangepas tot die koopkrag van die rand op 30 September 1975, weerspieël die behoue inkomste vir die jaar volgens die huidige koopkrag, en daardeur die uitwerking van inflasie op die resultate (Aant. 2).

	Historical basis Historiese basis	Adjusted basis Aangepaste basis		
	1975	1975 C.P.P. H.K.K. 30.9.75	1974 Updated to Bygewerk tot 30.9.75	
	R000	R000	R000	
Results for the year to 30 September				**Resultate vir die jaar tot 30 September**
Turnover	204 967	215 507	216 109	Omset
Operating surplus for the year (note 3)	21 441	15 961	13 980	Bedryfsurplus vir die jaar (aant. 3)
Taxation	8 524	8 597	8 895	Belasting
	12 917	7 364	5 085	
Less: Applicable to outside shareholders	519	207	721	*Min:* Toeskryfbaar aan buite-aandeelhouers
Income after taxation	12 398	7 157	4 364	Inkomste na belasting
Extraordinary item:				Buitengewone item:
Capital surplus on disposal of land and buildings	166	65	37	Kapitaalsurplus met verkoop van grond en geboue
Net income	12 564	7 222	4 401	Netto inkomste
Dividends:				Dividende:
Preference	36	37	42	Voorkeur
Ordinary	3 827	3 827	3 283	Gewone
	3 863	3 864	3 325	
Amount retained to finance future growth	8 701	3 358	1 076	Bedrag behou om toekomstige groei te finansier
Amount required to maintain the purchasing power of the ordinary shareholders' investment		5 343	5 281	Bedrag benodig om die koopkrag van die gewone aandeelhouersbelegging te handhaaf
Historical income retained	8 701	8 701	6 357	Historiese inkomste behou
Balance sheet—30 September				**Balansstaat—30 September**
Fixed assets *less* depreciation	24 211	36 418	36 654	Vaste bates *min* waardevermindering
Investments *less* amounts written off	99	197	197	Beleggings *min* bedrae afgeskryf
Loan portion of taxation	1 073	1 073	820	Leningsgedeelte van belasting
Net current assets	75 634	76 633	63 623	Netto bedryfsbates
	101 017	114 321	101 294	
Less: Preference capital	600	600	673	*Min:* Voorkeurkapitaal
Long term borrowings	28 204	28 204	18 440	Langtermynlenings
Amount set aside for deferred taxation	291	291	170	Bedrag opsygesit vir uitgestelde belasting
	71 922	85 226	82 011	
Less: Outside shareholders' interest	4 515	5 194	5 004	*Min:* Buite-aandeelhouersbelang
Ordinary shareholders' investment	67 407	80 032	77 007	Gewone aandeelhouersbelegging
Salient comparisons				**Opvallende vergelykings**
Earnings per ordinary share (cents)	54,91	31,63	19,20	Verdienste per gewone aandeel (sent)
Income after tax as a percentage of shareholders' funds	21,21	9,25	5,69	Inkomste na belasting as 'n persentasie van aandeelhouersfondse
Ordinary dividend cover	3,23	1,86	1,32	Gewone dividenddekking
Net asset value of ordinary capital per 50c share (cents)	299	356	342	Netto batewaarde van gewone kapitaal per aandeel van 50s (sent)

Notes on the Group results and financial position adjusted for the effect of inflation

1 Basis of adjustments

The historical figures for both years in respect of fixed assets, investments and stocks and the results have been adjusted to C.P.P. figures by applying factors based on the changes in the Consumer Price Index between the date of the originating transactions and 30 September 1975. Although the adjusted figures are shown in rand in terms of C.P.P. these are not necessarily replacement costs or current values.

The monetary items (note 5) for 1974 have been updated to C.P.P. rand at 30 September 1975. No adjustment has been made to these items for 1975 as they are already expressed in C.P.P. rand.

The figures for foreign subsidiaries included in the Group financial statements have been similarly adjusted by reference to the appropriate foreign indices and then translated into C.P.P. rand at the rates of exchange ruling at 30 September 1975.

Some of the Consumer Price Indices from which the above-mentioned factors have been derived are:

Aantekeninge oor die resultate en finansiële stand van die Groep soos aangepas vir die uitwerking van inflasie

1 Basis van aanpassing

Die historiese syfers vir albei jare t.o.v. vaste bates, beleggings en voorrade en die resultate is aangepas tot H.K.K.-syfers deur die toepassing van faktore wat gebaseer is op die veranderinge in die Verbruikersprysindeks tussen die datum van die oorspronklike transaksies en 30 September 1975. Alhoewel die aangepaste syfers getoon word in rand ooreenkomstig die H.K.K. is dié nie noodwendig vervangingskoste of huidige waarde nie.

Die monetêre items (aant. 5) vir 1974 is bygewerk tot H.K.K.-rand op 30 September 1975. Geen aanpassing is t.o.v. hierdie items vir 1975 aangebring nie aangesien hulle alreeds uitgedruk is in H.K.K.-rand.

Die syfers vir buitelandse filiale, by die finansiële state van die Groep ingesluit, is op soortgelyke wyse aangepas deur verwysing na die toepaslike buitelandse indekse en daarna in H.K.K.-rand omgereken teen wisselkoerse wat op 30 September 1975 geheers het.

Sommige van die Verbruikersprysindekse waaruit die bogenoemde faktore verkry is, is:

	South Africa and Swaziland Suid-Afrika en Swaziland	Rhodesia and Malawi Rhodesië en Malawi	
Base date			Aanvangsdatum
December 1964		100,0	Desember 1964
April 1970	100,0		April 1970
30 September 1973	126,1	129,0	30 September 1973
30 September 1974	143,5	140,5	30 September 1974
30 September 1975	161,0	151,0	30 September 1975

2 Shareholders' investment

A summary of the historical and C.P.P. build up of the shareholders' investment as at 30 September 1975 is given below:

2 Aandeelhouersbelegging

'n Opsomming van die historiese en die H.K.K.-opbou van die aandeelhouersbelegging op 30 September 1975 word hieronder uiteengesit:

	Historical Histories	C.P.P. H.K.K.		
	R000	R000	R000	
Historical as at 30 September 1974	58 296		58 296	Histories op 30 September 1974
Add: Amount arising from the restatement of fixed assets, investments and stock as at 30 September 1975 in 1975 C.P.P. rand		14 047		*Plus:* Bedrag voortspruitend uit die hertoning van vaste bates, beleggings en voorraad op 30 September 1975 in 1975 H.K.K. rand
Less: Outside shareholders' portion		679	13 368	*Min:* Buite-aandeelhouersgedeelte
			71 664	
Add: Amount required from current income to maintain C.P.P. of shareholders' funds			5 343	*Plus:* Bedrag benodig uit bedryfsinkomste om H.K.K. van aandeelhouersfondse te handhaaf.
1974 C.P.P. updated to 1975 C.P.P.			77 007	1974 H.K.K. bygewerk tot 1975 H.K.K.
Adjustment for extraneous items	410		(333)	Aanpassing t.o.v. buitengewone items
	58 706		76 674	
Add: Amount retained for the year for future growth	8 701		3 358	*Plus:* Inkomste behou vir die jaar vir toekomstige groei
Shareholders' investment—30 September 1975	67 407		80 032	Aandeelhouersbelegging—30 September 1975

3 Operating surplus for the year
The difference between the operating surplus on the historical basis and the adjusted basis is made up as follows:

3 Bedryfsurplus vir die jaar
Die verskil tussen die bedryfsurplus op die historiese basis en die aangepaste basis is soos volg:

1975 R000	1975 R000	1974 R000	1974 R000	
Historical operating surplus for the year	**21 441**		17 873	Historiese bedryfsurplus vir die jaar
Adjustments to convert to C.P.P. rand:				Aanpassings vir omrekening in H.K.K.-rand
Stock	**(5 109)**		(4 492)	Voorraad
Net additional charge which arises from restating cost of stock at the beginning and end of the year in C.P.P. rand (note 4)				Netto bykomende debiet wat voortspruit uit hertoning van voorraadkoste aan die begin van die jaar in H.K.K.-rand (aant. 4)
Depreciation	**(1 081)**		(827)	Waardevermindering
Additional depreciation based on the higher cost of fixed assets when adjusted to C.P.P. rand				Bykomende waardevermindering gebaseer op die hoër koste van vaste bates wanneer aangepas tot H.K.K.-rand
Net monetary items (note 5)				**Netto monetêre items** (aant. 5)
Gain/(Loss) in purchasing power resulting from the effects of inflation:				Wins/(Verlies) in koopkrag as gevolg van die uitwerkings van inflasie:
(a) Preference Capital and Long Term Borrowings	**2 078**	2 113		(a) Voorkeurkapitaal en Langtermynlenings
(b) Other items	**(1 368)** **710**	(2 291)	(178)	(b) Ander items
	15 961		12 376	
Adjustment required to update 1974 C.P.P. figures as originally computed to 1975 C.P.P. rand:				Aanpassing wat nodig is om die 1974 H.K.K.-syfers soos oorspronklik bereken tot 1975 H.K.K.-rand by te werk.
Variation in inflation indices		1 455		Afwyking in inflasie-indekse
Variation in currency exchange rates		149	1 604	Afwyking in valutawisselkoerse
C.P.P. operating surplus for the year	**15 961**		13 980	H.K.K.-bedryfsurplus vir die jaar

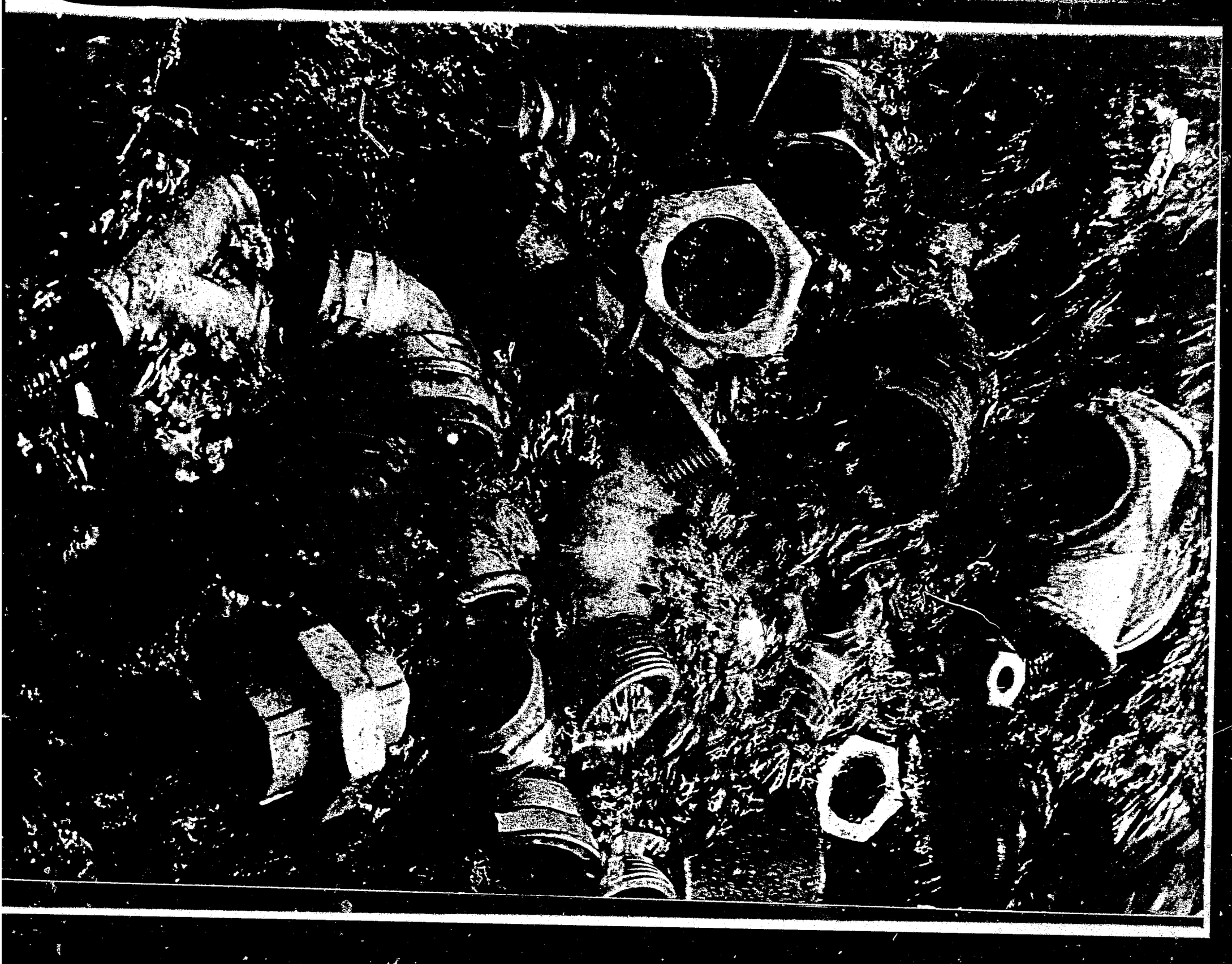
4 Stock
This charge arises due to the additional funds required to replace the same level of stock held at the beginning of the year in terms of the value of the rand at the end of the year. It is offset to a small extent by revaluing the closing stock in C.P.P. terms.

5 Net monetary items
Net monetary items comprise preference capital and long term borrowings together with outside shareholders' interest, the amount set aside for deferred taxation and other liabilities, less loan portion of taxation and current assets other than stock.

4 Voorraad
Hierdie debiet ontstaan vanweë die addisionele fondse wat benodig word om dieselfde voorraadpeil wat aan die begin van die jaar gehou is, ooreenkomstig die waarde van die rand aan die einde van die jaar te vervang. Hierdie debiet word in 'n geringe mate teengewerk deur herwaardering van die eindvoorraad in H.K.K.-terme.

5 Netto monetêre items
Netto monetêre items behels voorkeurkapitaal en langtermynlenings tesame met buite-aandeelhouersbelang, die bedrag wat opsygesit is vir uitgestelde belasting en ander laste, min leningsgedeelte van belasting en bedryfsbates behalwe voorraad.

Brass and malleable iron water pipe fittings.
Waterpyptoebehore van geelkoper en smeebare yster.



Ten year financial review 1966-1975

	1975 R000	1974 R000	1973 R000	1972 R000	1971 R000	1970[3] R000
Results						
Net sales	**204 967**	179 265	136 948	112 030	108 290	99 606
Operating surplus	**21 441**	17 873	9 606	5 893	7 467	6 018
Provision for taxation	**8 524**	7 765	4 057	2 096	2 952	2 413
Profit/(loss) applicable to outside shareholders	**519**	339	546	485	236	90
Net income after taxation	**12 398**	9 269	5 003	3 312	4 279	3 515
Extraordinary items	**166**	50	181	421	(358)	(116)
Transferred to non-distributable reserves	**204**	498	181	1	62	(116)
Dividends paid—preference	**36**	36	36	36	36	36
Dividends paid—ordinary	**3 827**	2 926	2 251	2 026	2 026	1 801
Distributable income retained	**8 497**	5 859	2 716	1 670	1 797	1 678
Statistics						
Operating surplus to sales (%)	**10,46**	9,97	7,01	5,26	6,89	6,04
Annual increase in sales (%)	**14,34**	30,90	22,24	3,45	34,66	—
Earnings per ordinary share	**54,9c**	41,0c	22,1c	14,6c	18,8c	15,5c
Ordinary dividend	**17c**	13c	10c	9c	9c	8c
Ordinary dividend cover	**3,23**	3,15	2,21	1,62	2,09	1,94
Net income after tax as a percentage of shareholders' funds at beginning of year (%)	**21,21**	17,63	10,07	6,99	9,29	11,45
Liquidity ratio	**1,84**	1,38	1,62	1,57	1,16	1,71
Depreciation charged	**2 186**	2 013	1 814	1 698	1 587	1 202
Gross additions to property, plant and equipment	**3 481**	5 254	2 770	3 834	5 492	1 820
Payroll and fringe benefits	**41 702**	33 193	25 204	22 259	20 880	17 235
Manning	**11 819**	12 066	10 664	10 131	10 500	8 967
Assets and liabilities						
Total funds employed	**101 017**	79 412	71 166	62 468	55 610	50 46
Preference and loan capital and other funds	**33 610**	21 116	18 809	13 135	8 758	4 69
Book value of ordinary shareholders' funds	**67 407**	58 296	52 357	49 333	46 852	45 77
Nominal value of ordinary share capital	**11 255**	11 255	11 255	11 255	11 255	11 25
Net asset value of ordinary capital per 50c share	**299c**	259c	233c	219c	208c	203
Share price at year end	**180c**	130c	175c	142c	120c	130

1 1970 performance on same basis as prior years with the addition of acquired companies for cash or part cash and part shares, viz. Vosa Valves (Pty) Ltd and J. H. Vivian & Co Ltd.

2 1970 performance as shown in the income statement and balance sheet including all subsidiary companies from the respective dates of acquisition, and the actual dividends declared in accordance with the respective agreements.

3 1970 performance adjusted to include 12 months actual results to 30 September 1970 for all subsidiary companies regardless of effective date of take-over and with an annual dividend rate. This became the basis for comparison with future years' results in the ten year period review.

*The dividend cover is related to the dividend on existing share capital at 27 September 1969 whilst the dividend declared includes the dividend on shares issued for the acquisition of J. H. Vivian & Co Ltd.

Finansiële oorsig vir die tien jaar 1966-1975

2 1970 R000	1 1970 R000	1969 R000	1968 R000	1967 R000	1966 R000	
						Resultate
80 418	63 652	51 798	51 099	47 061	47 237	Netto verkope
5 192	3 794	2 091	2 466	1 198	2 759	Bedryfsurplus
2 083	1 478	905	1 040	395	816	Voorsiening vir belasting
77	77	7	(18)	(3)	6	Wins/(verlies) van toepassing op buite-aandeelhouers
3 032	2 239	1 179	1 444	806	1 937	Netto inkomste na aftrekking van belasting
(116)	(120)	1 053	1 176	252	(12)	Buitengewone items
(116)	(116)	109	174	252	—	Oorgedra na nie-verdeelbare reserwes
36	36	36	36	36	36	Dividende betaal—voorkeur
1 400	1 200	1 125	908	908	908	Dividende betaal—gewone
1 596	999	962	1 502	(138)	981	Verdeelbare inkomste behou
						Statistieke
6,45	5,96	4,04	4,83	2,55	5,84	Bedryfsurplus tot verkope (%)
55,25	—	1,37	8,58	(0,37)	(7,65)	Jaarlikse toename in verkope (%)
13,3c	14,7c	8,5c	10,5c	5,7c	14,1c	Verdienste per gewone aandeel
8c	8c	*7,50c	6,75c	6,75c	6,75c	Gewone dividend
1,66	1,84	*1,13	1,56	0,84	2,09	Gewone dividendedekking
9,86	7,25	3,90	5,10	2,79	7,11	Netto inkomste na belasting as 'n persentasie van aandeelhouersfondse aan die begin van die jaar (%)
1,69	1,67	2,26	1,86	1,47	1,45	Likiditeitsverhouding
1 007	885	771	855	772	815	Waardevermindering gedebiteer
7 441	1 355	869	785	1 604	1 616	Bruto toevoegings tot eiendom, aanleg en toerusting
15 295	14 150	12 513	12 292	12 066	11 760	Salarisse, lone en byvoordele
8 967	7 354	6 818	7 153	7 726	7 679	Bemanning
						Bates en laste
50 385	40 168	34 473	33 672	32 001	31 740	Totale fondse aangewend
4 697	4 120	4 101	4 371	4 376	4 184	Voorkeur- en leningskapitaal en ander fondse
45 688	36 048	30 372	29 301	27 625	27 556	Boekwaarde van gewone aandeelhouersfondse
11 255	7 502	*6 726	6 726	6 726	6 726	Nominale waarde van gewone aandelekapitaal
203c	240c	226c	218c	204c	205c	Netto batewaarde van gewone kapitaal per 50 sent aandeel
130c	130c	209c	133c	120c	166c	Aandeelprys aan jaareinde

1 1970 prestasie is op dieselfde basis as vorige jare met die byvoeging van verwerfde maatskappye vir kontant of deels kontant en deels aandele, nl. Vosa Valves (Pty) Ltd en J. H. Vivian & Co Ltd.

2 1970 prestasie soos aangetoon in die inkomste- en balansstate insluitende alle filiaalmaatskappye vanaf die onderskeie datums van verkryging, sowel as die werklike dividende wat volgens die onderskeie ooreenkomste verklaar is.

3 1970 prestasie aangepas om die werklike resultate van 12 maande tot 30 September 1970 vir al die filiaalmaatskappye in te sluit, ongeag die datum van oorname en met 'n jaarlikse dividendkoers. Dit het die basis van vergelyking geword vir resultate van toekomstige jare in die tienjaartydperkoorsig.

*Die dividendedekking het betrekking op die dividende op bestaande aandelekapitaal op 27 September 1969, terwyl die verklaarde dividend die aandele insluit wat met die oog op die oorname van J. H. Vivian & Co Ltd uitgereik is.

Financial calendar for 1976

Finansiële kalender vir 1976

The pattern of dividend and interest payments is:		Die patroon van dividend- en rentebetalings is:	
Ordinary Dividend	Announced December Paid January	Gewone Dividend	Aangekondig Desember Betaal Januarie
Preference Dividend	Payable in equal instalments at beginning January and July.	Voorkeurdividend	Betaalbaar in gelyke paaiemente begin Januarie en Julie
Unsecured Loan Stock Interest 7,5% 1975/1984	Payable 30 June and 31 December	Rente op onversekerde leningseffekte 7,5% 1975/1984	Betaalbaar 30 Junie en 31 Desember
Unsecured Debenture Stock Interest: 1. 10,25% 1982/1991 2. 9,2% 1984/1998 3. Series A and B 1986/1995	Payable 31 March and 30 September	Rente op onversekerde obligasies 1. 10,25% 1982/1991 2. 9,2% 1984/1998 3. Reeks A en B 1986/1995	Betaalbaar 31 Maart en 30 September
4. Series A 13,375% 1987/1996 and Series B 13,125% 1981/1985	Payable 30 June and 31 December	4. Reeks A 13,375% 1987/1996 en Reeks B 13,125% 1981/1985	Betaalbaar 30 Junie en 31 Desember

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Annual Report 1974

THE UNION STEEL CORPORATION

(OF SOUTH AFRICA) LIMITED

The Union Steel Corporation

(OF SOUTH AFRICA) LIMITED

(Incorporated in the Republic of South Africa)

Sixty-third
Annual Report 1974

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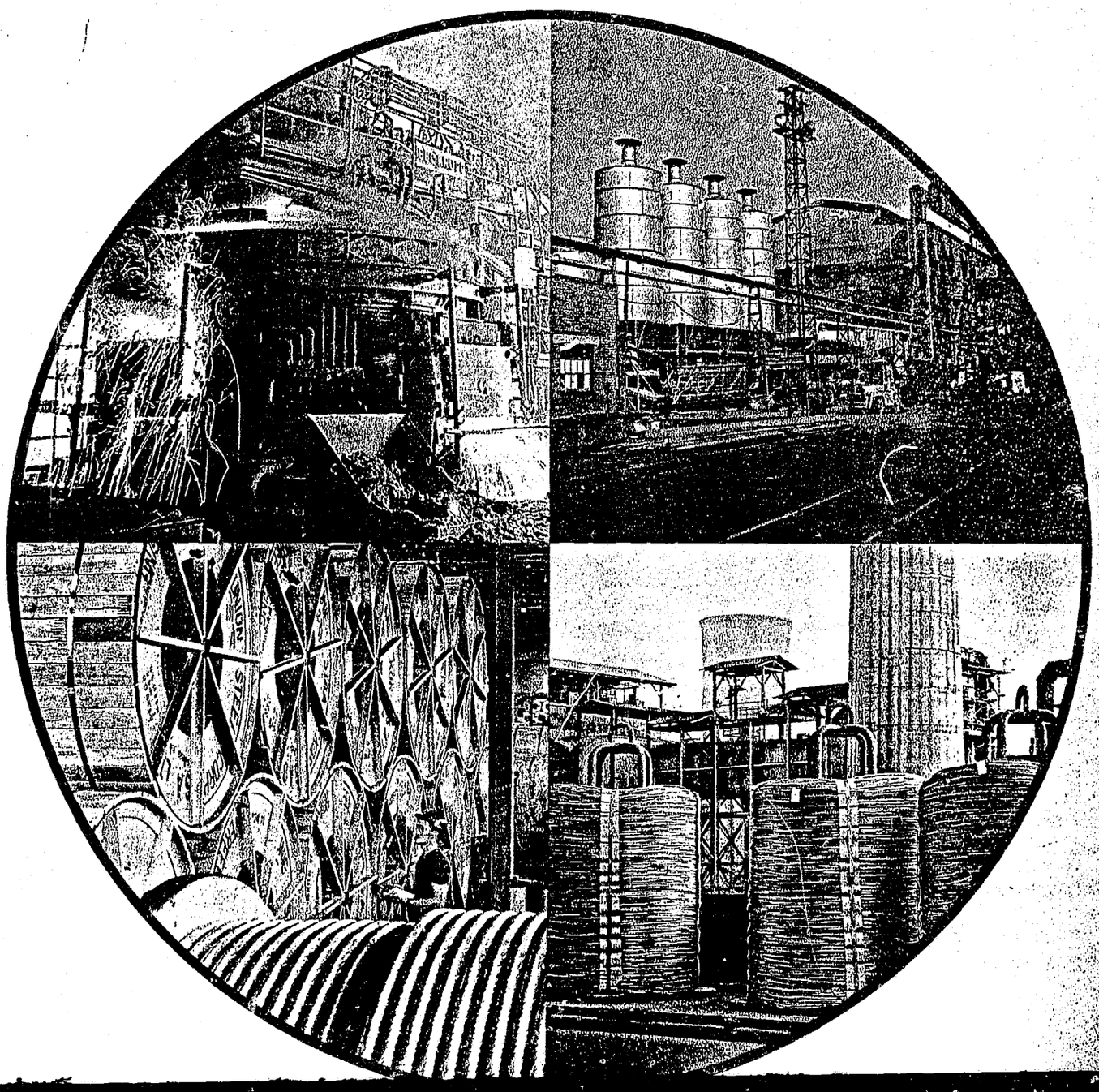
USCO

The Usco group manufactures mild and special steel sections, castings, agricultural discs and earthengaging parts, copper wire and aluminium overhead conductor.
Usco further has interests in steel merchants and suppliers of copper and aluminium rod.
Usco shares are quoted on the stock exchanges of Johannesburg and London.



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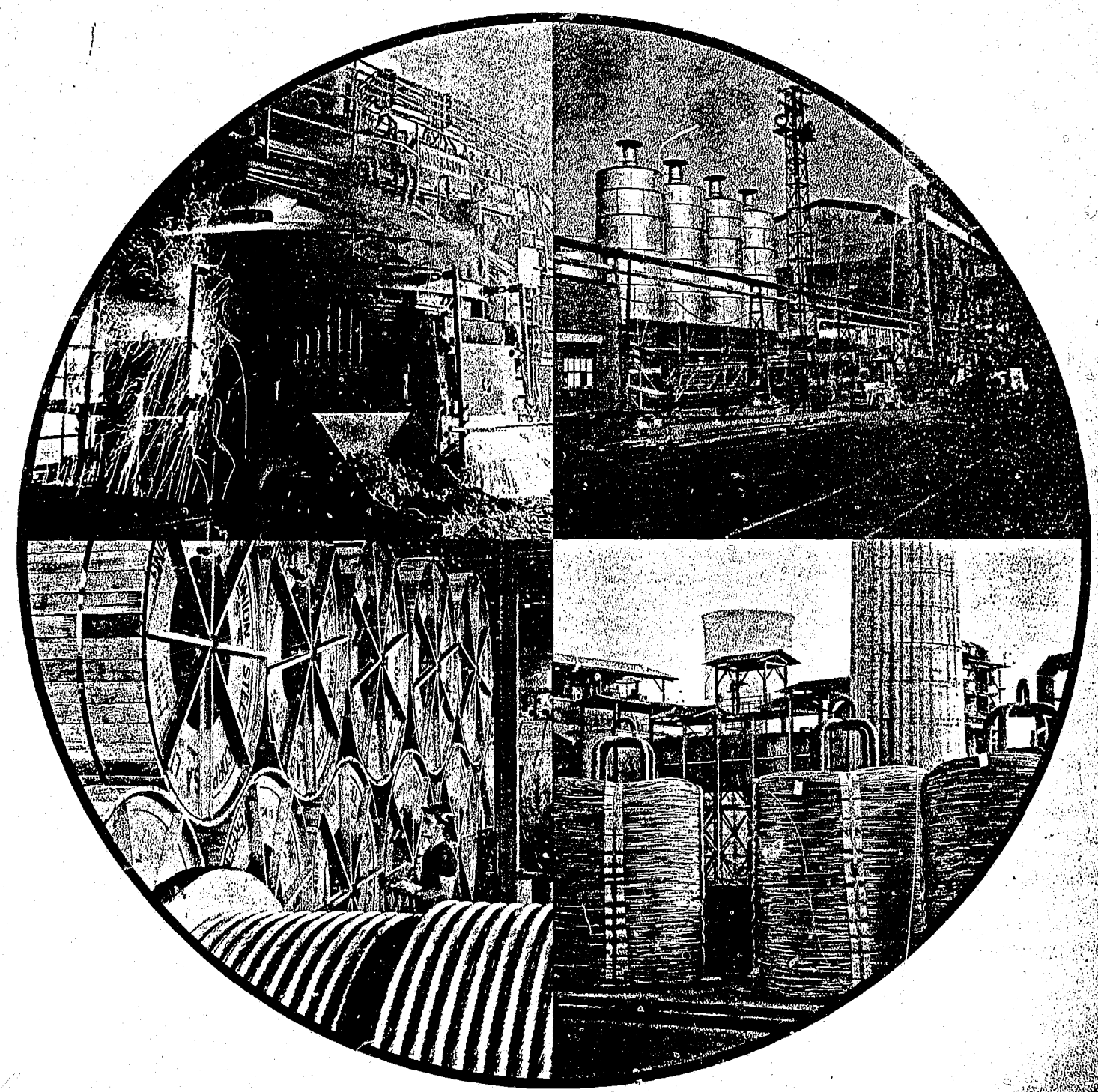

Directors and Management

Directors
Dr. M. D. Marais (Chairman)
Prof. H. J. Samuels (Deputy Chairman)
J. P. Coetzee
E. P. Gush
W. J. Hefer
Prof. P. W. Hoek
H. C. H. Hutten (Executive Director)
S. B. Kossuth

Alternate Directors
H. J. Barnard
M. W. King
M. C. O'Dowd
D. J. Ritson

Executive Officers
J. C. de Waal (General Manager)
Dr. F. W. Güldenpfennig (Divisional Manager: Steel Manufacturing)
D. C. Odendaal (Divisional Manager: Finance and Administration)
J. C. Steenkamp (Divisional Manager: Personnel Services)
J. U. van Wyk (Divisional Manager: Usco Subsidiaries)
J. H. Vorster (Technical Manager)

Secretary
R. J. van Jaarsveld,
P.O. Box 48,
General Hertzog Road,
Vereeniging 1930.

London Secretaries
Anglo American Corporation
of South Africa Limited,
40 Holborn Viaduct,
London, E.C.1.

Transfer Secretaries
Consolidated Share Registrars
Limited,
62 Marshall Street, Johannesburg 2000.

Bankers
Barclays National Bank Limited
Volkskas Limited

Auditors
Deloitte & Co., Johannesburg

Registered Office
P.O. Box 48, General Hertzog Road, Vereeniging 1930.

Notice of Meeting

NOTICE IS HEREBY GIVEN that the Sixty-Third Ordinary General Meeting of Shareholders of the Corporation will be held in the Board Room of the Corporation, General Hertzog Road, Vereeniging, on 2nd June, 1975, at 12h00 for the following purposes, viz:

1. To receive and consider the annual financial statements for the year ended 31st December, 1974.

2. **Special business**
   To consider and, if deemed fit, to pass with or without modification the following resolutions:

   2.1. **Ordinary resolution**
   That the Directors be and they are hereby authorised to borrow monies on behalf of the Corporation to the extent that the aggregate amount of such borrowed money should at any time not exceed R50 000 000.

   2.2. **Ordinary resolution**
   That the Directors be paid out of the funds of the Corporation by way of remuneration for their services as such, at the rate of R3 000 per annum each, while the Chairman of the Board of Directors shall be paid an additional sum of R2 000 per annum, with effect from the 1st January, 1974.

3. To transact any other business that may be transacted at an ordinary general meeting of shareholders of the Corporation.

A Shareholder entitled to attend and vote at the above-mentioned meeting is entitled to appoint a proxy to attend and vote and speak in his stead. A proxy need not be a shareholder of the Corporation. Shareholders desirous of lodging a proxy must lodge same at the Corporation's registered office or at is London office not later than 48 hours before the date of the meeting. The transfer registers of the Corporation, both in Johannesburg and London, will be closed from the 26th May, 1975, to 2nd June, 1975, both days inclusive.

By order of the Board,
R. J. VAN JAARSVELD,
Secretary.
18th February, 1975.

Prof. P. W. Hoek
H. C. H. Hutten (Executive Director)
S. B. Kossuth

Alternate Directors

H. J. Barnard
M. W. King
M. C. O'Dowd
D. J. Ritson

Executive Officers

J. C. de Waal (General Manager)
Dr. F. W. Güldenpfennig (Divisional Manager: Steel Manufacturing)
D. C. Odendaal (Divisional Manager: Finance and Administration)
J. C. Steenkamp (Divisional Manager: Personnel Services)
J. U. van Wyk (Divisional Manager: Usco Subsidiaries)
J. H. Vorster (Technical Manager)

Secretary

R. J. van Jaarsveld,
P.O. Box 48,
General Hertzog Road,
Vereeniging 1930.

London Secretaries

Anglo American Corporation
of South Africa Limited,
40 Holborn Viaduct,
London, E.C.1.

Transfer Secretaries

Consolidated Share Registrars
Limited,
62 Marshall Street, Johannesburg 2000.

Bankers

Barclays National Bank Limited
Volkskas Limited

Auditors

Deloitte & Co., Johannesburg

Registered Office

P.O. Box 48, General Hertzog Road, Vereeniging 1930.

1. To receive and consider the annual financial statements for the year ended 31st December, 1974.

2. **Special business**
   To consider and, if deemed fit, to pass with or without modification the following resolutions:

   2.1. **Ordinary resolution**
   That the Directors be and they are hereby authorised to borrow monies on behalf of the Corporation to the extent that the aggregate amount of such borrowed money should at any time not exceed R50 000 000.

   2.2. **Ordinary resolution**
   That the Directors be paid out of the funds of the Corporation by way of remuneration for their services as such, at the rate of R3 000 per annum each, while the Chairman of the Board of Directors shall be paid an additional sum of R2 000 per annum, with effect from the 1st January, 1974.

3. To transact any other business that may be transacted at an ordinary general meeting of shareholders of the Corporation.

A Shareholder entitled to attend and vote at the above-mentioned meeting is entitled to appoint a proxy to attend and vote and speak in his stead. A proxy need not be a shareholder of the Corporation. Shareholders desirous of lodging a proxy must lodge same at the Corporation's registered office or at is London office not later than 48 hours before the date of the meeting. The transfer registers of the Corporation, both in Johannesburg and London, will be closed from the 20th May, 1975 to 2nd June, 1975, both days inclusive.

By order of the Board,
R. J. VAN JAARSVELD,
Secretary.

18th February, 1975.

Group Financial Highlights

	1974	1973
OPERATING SUMMARY		
Total sales	134 010 000	104 203 000
Profit before tax	6 248 000	1 342 000
Profit after tax	5 226 000	868 000
FINANCIAL SUMMARY		
Working capital	16 973 000	12 798 000
Net fixed assets	31 078 000	29 963 000
Other assets	5 513 000	5 688 000
Long term liabilities	22 752 000	21 530 000
Shareholders funds	30 812 000	26 919 000
KEY DATA		
Sales (growth)	28,6%	35,5%
Cash flow	9 294 000	3 923 000
Net worth per ordinary share	104,49c	91,06c
Earnings per ordinary share	17,86c	2,85c
Current ratio	1,8:1	1,8:1

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Chairman's Statement

RESULTS

The Corporation has had a favourable year.
The good results are particularly pleasing when one considers that we originally had only anticipated a small profit for the year. The biggest contributory factors to the favourable results were a reasonable increase in the prices of controlled steels which was granted during the year, sufficient raw materials to maintain production-units in full production, good despatches and sustained efficient efforts by Usco employees.

PROSPECTS

The economy of the Western world provides considerable cause for concern, with signs of increasing recession in the majority of countries. The South African economy will certainly not entirely escape this, but I believe that the markets for the Corporation's main products, namely steel, aluminium and copper, will not level off during the year to any appreciable extent. An increase in the price of controlled steel products has already been granted with effect from the 1st January, but it will not be sufficient to cover rises in costs which continually persist. Here I refer specifically to the prices of imported alloys which spiral with each delivery.

I appreciate the realistic pricing policy for controlled steels accepted by the Government and I trust that a further price increase will be considered to compensate for rising costs.

The Corporation follows a definite policy of concentrating on the manufacture of the more profitable special steels and attention is constantly being given to the processing of our own steel into products which provide a higher return on investment. In this way the limited supply of steel scrap can be utilised to obtain the greatest profitability.

Financing the activities remains one of our greatest problems. The demand for working capital is constantly increasing. At the same time the Board's borrowing powers are being employed to the maximum in order to replace obsolete equipment, expand manufacturing capacity and make provision for the manufacturing of high grade special steels. With this objective in mind the Board has approved R4,4 million to install a modern electroslag refining plant and forge press. The obsolete condition of Veldmaster's equipment for the manufacture of agricultural discs and earthengaging parts has necessitated the expenditure of R2 million on this plant. The Corporation has succeeded in obtaining loan capital at favourable rates of interest in order to finance these contemplated capital projects. At the same time R4 million has been transferred from profits to reserves to facilitate the financing of the Corporation's future activities.

MANAGEMENT AND PERSONNEL

The Board believes that the growth of the Corporation is closely associated with the development of its human resources. Therefore particular attention is being given to the training of both white and black workers.

Internal training facilities are being created in order to realise this goal. Higher productivity of workers is the greatest single factor which can assist in combating rising wage costs.

I wish to thank my colleagues on the Board, the Management and Personnel for their contributions during the past year.

M. D. MARAIS
Chairman

18th February, 1975.

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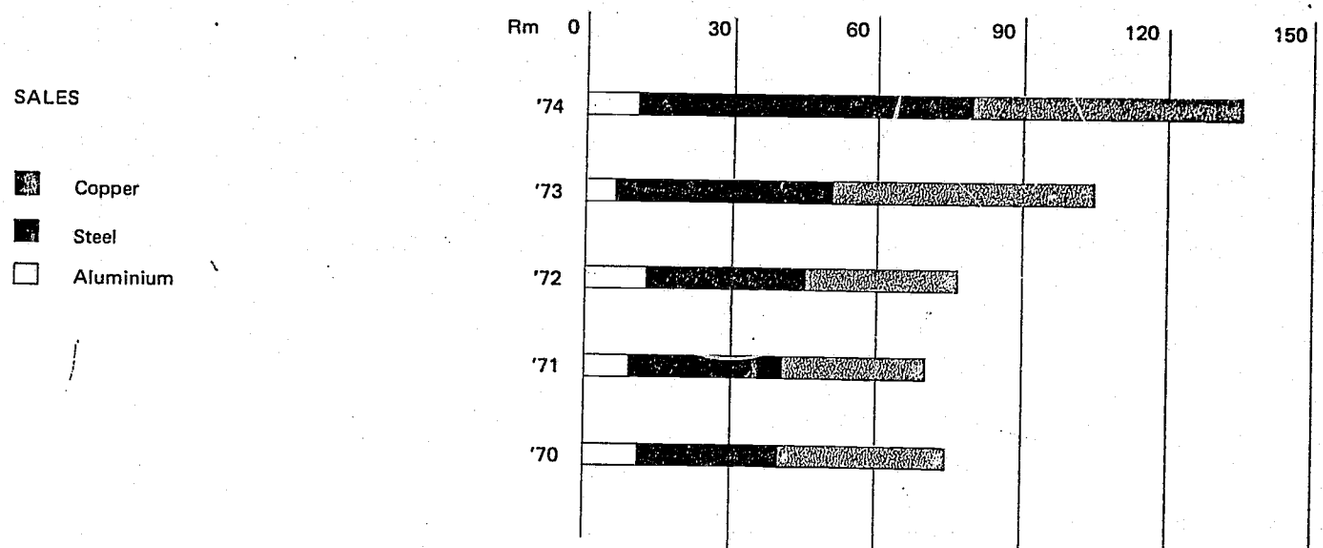
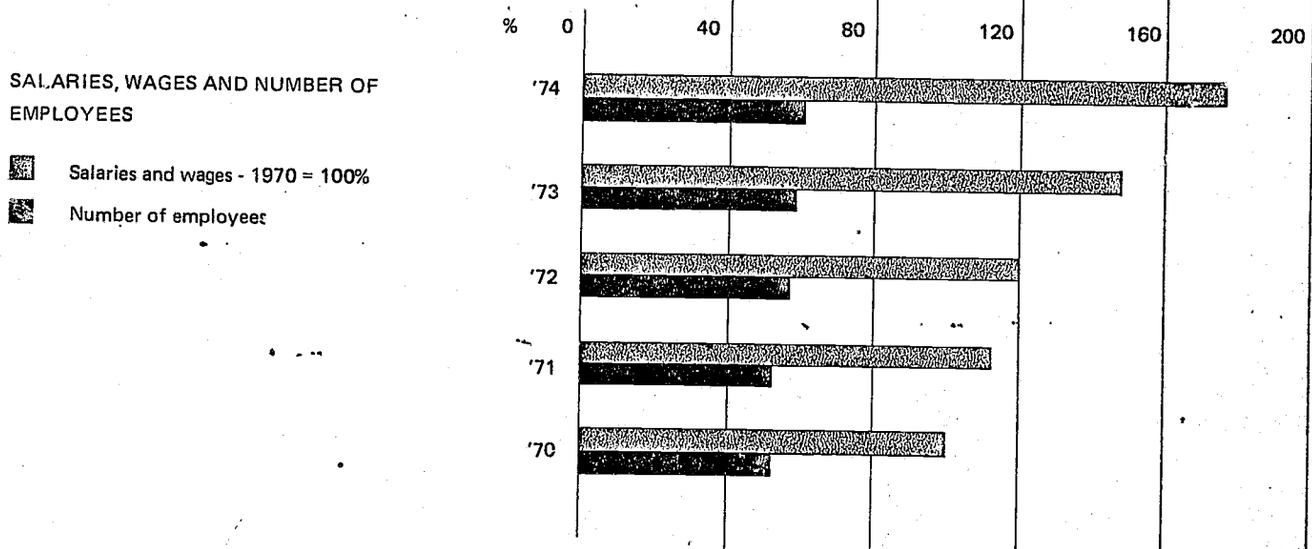
Chairman

18th February, 1975.

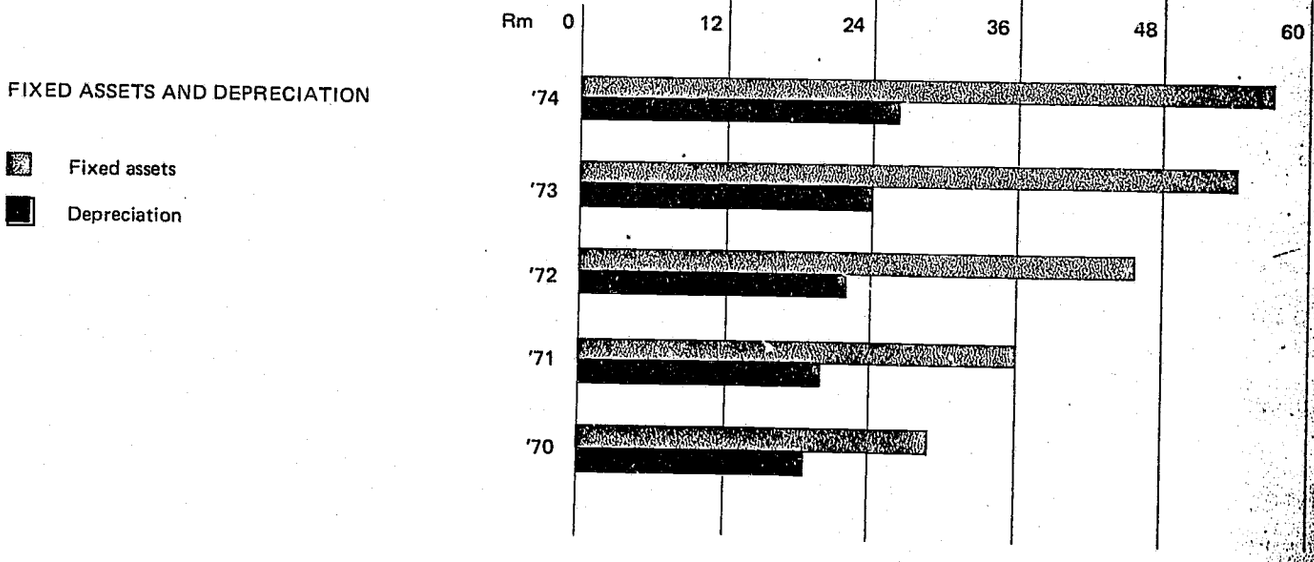
SALES

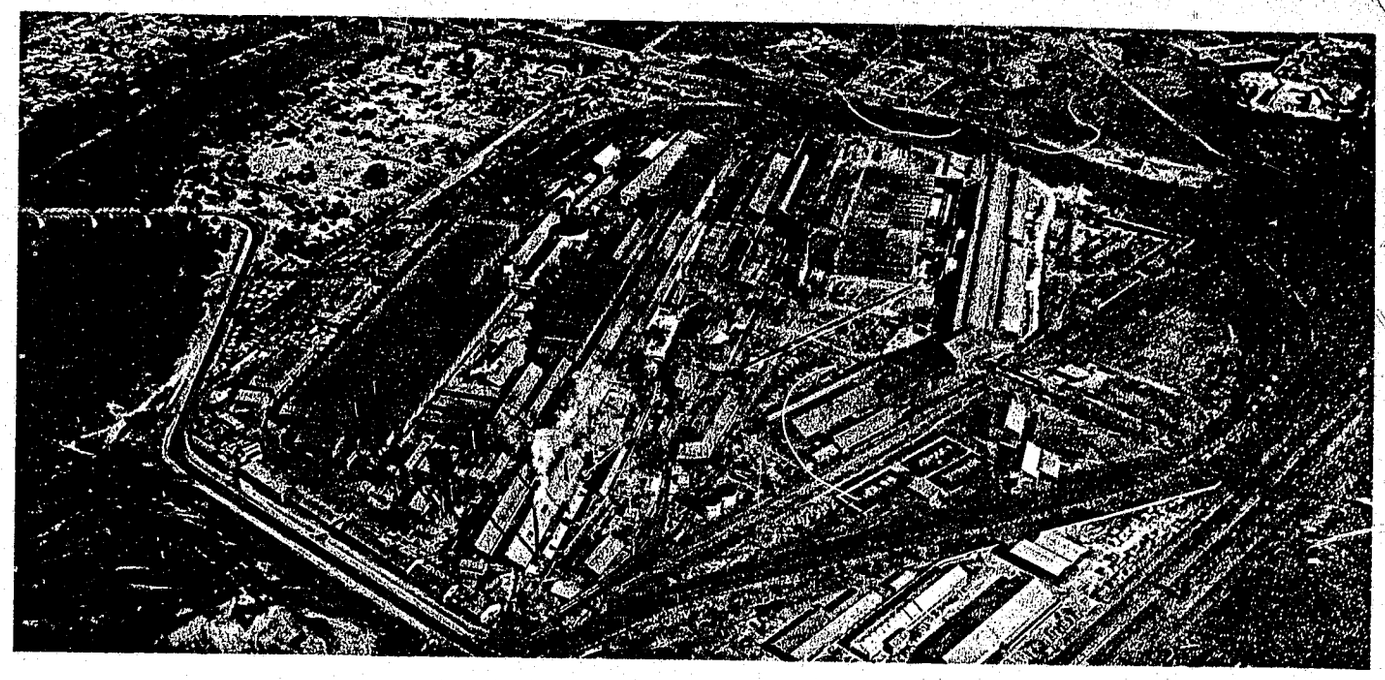


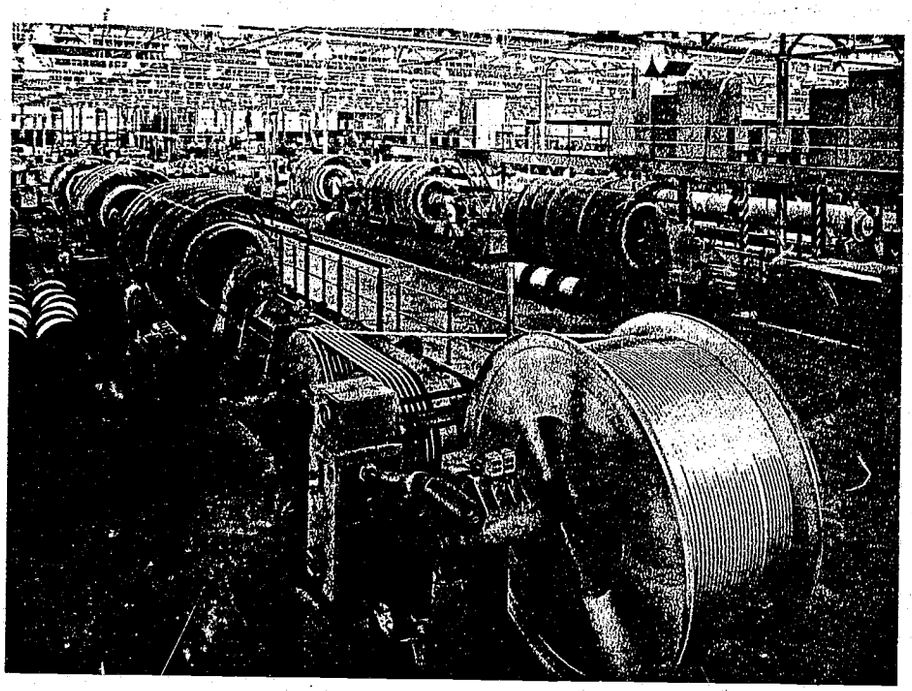
SALARIES, WAGES AND NUMBER OF EMPLOYEES

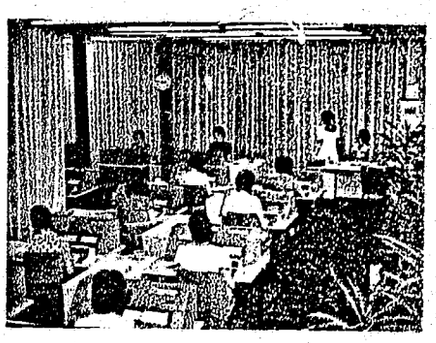


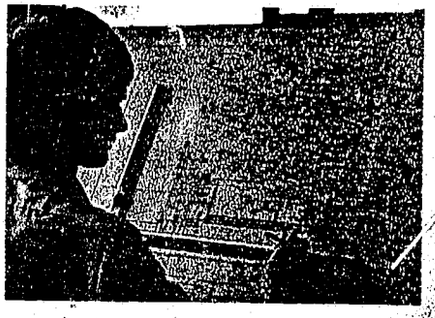
FIXED ASSETS AND DEPRECIATION

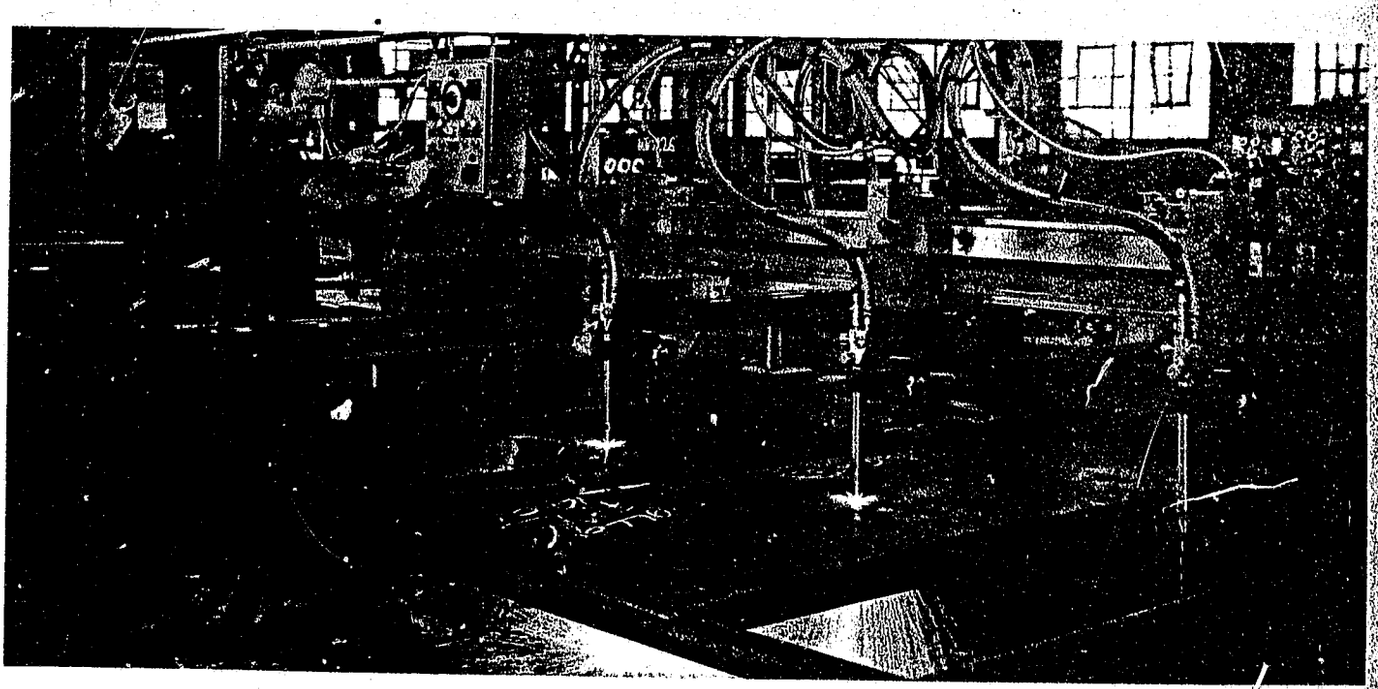












Group Annual Financial Statements

FOR THE YEAR ENDED 31st DECEMBER, 1974

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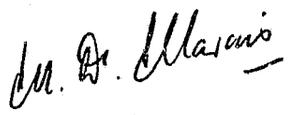
Report of the Directors	8
Income Statement	12
Balance Sheet	13
Notes to the Annual Financial Statements	14
Statement of Source and Application of Funds	19
Group Five Year Review	20

The Group Annual Financial Statements which appear on pages 8 to 19 were approved by the Board of Directors on 18th February, 1975, and are signed on its behalf by



M. D. MARAIS,
Chairman.

J. P. COETZEE,
Director.

Report of the Auditors

To the Members of the Union Steel Corporation (of South Africa) Limited

We have examined the annual financial statements set out on pages 8 to 19 and in our opinion, based on our examination and the reports of the auditors of certain subsidiaries not audited by us, these statements fairly present the financial position of the corporation and its subsidiaries and the results of their operations in the manner required by the Companies Act, 1973.

Deloitte & Co.,

Chartered Accountants (S.A.)
Johannesburg.
18th February, 1975.

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On behalf of the Board

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18th February, 1975.

Report of the Directors

Your Directors have pleasure in submitting their report and audited Financial Statements for the year ended 31st December, 1974.

GROUP RESULTS

The profit attributable to shareholders of Usco, after taxation, amounted to R5 226 000, which is R4 358 000 higher than the previous year. Turnover increased from R104 203 000 to R134 010 000, while earnings per ordinary share increased from 2,85 cents to 17,86 cents.

Operating surplusses increased from R5 223 000 to R11 867 000, the main contributors being special steel and aluminium products. Interest charges again increased sharply by R1 520 000 as a result of high interest rates on local and overseas borrowings.

The proportion of profits before tax attributable to the various classes of business were:

	1974	1973
Steel Division	4 673 000	338 000
Non-ferrous Division	1 575 000	1 004 000
	R6 248 000	R1 342 000

GROUP ACTIVITIES

Steel

Usco manufactures mild steel sections, special steels and castings. Despatches of all steel products for the year increased by 27 000 tons to 291 000 tons. The new mill at Vaal Works was commissioned during September, 1974 and is expected to run smoothly early in the new year. The steel price increase granted in June assisted in absorbing substantial increases in costs, particularly in labour, alloys and railage.

Copper

This division obtains its copper rod from Transvaal Copper Rod Company. The rod is drawn into wire and strip and some wire is further processed into copper strand. The initial peak demand conditions levelled off during the latter half of the year, a tendency which is expected to continue for some time. Although below budget, copper again made a satisfactory contribution to group profits.

Usco Aluminium Corporation (Pty) Limited

The plant is situated at Richards Bay and the company manufactures bare aluminium overhead conductor for transmission of electricity. The company enjoyed a successful year producing profits in excess of budget, mainly as a result of better utilisation of plant capacity. An upsurge in the demand for overhead conductor as a result of the energy crisis promises further growth in the coming year.

Veldmaster (Pty) Limited

Manufacturer of agricultural discs and earthengaging parts. The major part of the output is exported. The congestion in South African ports resulted in export targets not being met, with high delaying charges incurred. The escalation of maintenance costs further contributed towards a loss for the year. The plant is being modernised, which should assist in improving profitability in the coming year.

Usco Cable Company (Pty) Limited

Negotiations have been finalised with Southwire of America, the other shareholder, whereby the patent for the manufacture of "Triple E" aluminium cable will be returned to them. Usco Cable Company will thereafter become a full subsidiary of Usco, manufacturing conventional armoured cable to S.A.B.S. standards, acceptable to local industry.

Transvaal Copper Rod Company

The function of this joint venture between Usco and Palabora Mining Company is to convert molten copper, supplied by Palabora Mining Company, into rod which is sold exclusively by Usco. The results for the year were slightly below budget as a result of the levelling off in the demand for copper rod.

National Materials Service Corporation (Pty) Limited

This joint enterprise between Usco and Klöckner Nederland B.V. operates as a steel merchant and service centre. The company had another successful year.

Hall & Pickles (Coastal) (Pty) Limited

This company operates as a steel merchant in Durban and Port Elizabeth and produced satisfactory results during the year.

Veldmaster (Rhodesia) (Pvt) Limited

This company which manufactures agricultural discs in Rhodesia, maintained its profitability.

Alustang (Pty) Limited

A company jointly owned by Usco, Aberdare Cables Limited and Alusaf (Pty) Limited, manufacturing aluminium rod for production of overhead conductor at Richards Bay.

A dividend was not declared because income was retained to finance the erection of an additional melting furnace.

African Aluminium Company (Pty) Limited

This company, established in 1955 by Usco and Aberdare Cables Ltd., for the purpose of producing aluminium rod from imported aluminium ingots, ceased operations and a final liquidation dividend was received during the year.

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CONSOLIDATED BALANCE SHEET

The total capital employed at the end of the financial year amounted to R53 564 000 (1973: R48 449 000) of which approximately 70 per cent was utilised in the steel division and 30 per cent in the non-ferrous division. The total capital expenditure for the year amounted to R3 825 000 (1973: R8 611 000) and was mainly allocated to the completion of the steel expansion scheme, particularly the new mill at Vaal Works. In addition commitments for capital expenditure at the year end amounted to R3 296 000 (1973: R2 099 000) while your directors have authorised further expenditure in the amount of R4 798 000 (1973: R815 000). These amounts will be mainly spent to modernise manufacturing facilities for special steels as well as agricultural discs and parts.

Stocks at R24 300 000 reflected an increase of R8 236 000 over 1973. The increase is due to higher unit costs and increased physical stocks which resulted mainly from increased production activities.

SHARE CAPITAL

The authorised and issued share capital of the Corporation remained unchanged at R15 005 000 divided into 29 010 000 ordinary shares of 50 cents each, 125 000 Preferent "A" shares of R2 each and 125 000 Preferent "B" shares of R2 each, all fully paid up.

FINANCE

The cash requirements to finance the various activities of the group, both for working capital and modernisation of production facilities, are increasing annually. The cash requirements for the coming year will be met partly by retained profits and by further borrowings, for which facilities have already been arranged.

Shareholders will notice that approval is required at the coming annual general meeting for the borrowing powers of the directors to be increased to R50 000 000.

DIVIDENDS

Dividends declared during the year totalled 18 cents per R2 share on the Cumulative Participating Preferent "A" and "B" shares.

An ordinary dividend of 4,5 cents per share was declared on 18th February, 1975, payable to ordinary shareholders registered on 7th March, 1975, and dividend warrants will be posted on or about 10th April, 1975.

BOARD OF DIRECTORS

On 17th September, 1974, Mr. M. W. King was appointed as alternate director to Mr. E. P. Gush, who withdrew his nomination of Mr. M. W. Dunningham. Details regarding directors are shown on page 2 of this report.

SECRETARY

Mr. R. J. van Jaarsveld was appointed Secretary on the 21st May, 1974, in the place of Mr. H. J. Oosthuizen, who left the service of the Corporation. The business address of the Secretary is General Hertzog Road, Vereeniging, and his postal address is P.O. Box 48, Vereeniging 1930.

GROUP PROFIT AND APPROPRIATIONS

	1974 R'000	1973 R'000
Group profit for the year after taxation	5 110	785
Add Outside shareholders' share of loss in a subsidiary company	116	83
Profit attributable to shareholders of Usco	5 226	868
Add Retained income at beginning of the year	1 028	1 200
Available for appropriation	6 254	2 068
Your Directors have allocated this total as follows:		
Dividends	1 350	40
Transfer to reserve for replacement of fixed assets	3 000	1 000
Transfer to general reserve	1 000	—
	5 350	1 040
Retained income at end of the year	904	1 028
	6 254	2 068

INFORMATION IN RESPECT OF SUBSIDIARY COMPANIES

Interest in subsidiaries

			Usco interest at book value			
			Shares		Indebtedness	
Name of Subsidiary	Issued Capital	Usco Interest	1974	1973	1974	1973
	R		R	R	R	R
Usco Aluminium Corporation (Pty) Limited	3 000 000	100%	3 000 000	3 000 000	342 922	(1 596 626)
Veldmaster (Pty) Limited	200 000	100%	303 391	443 435	3 908 637	1 746 065
Usco Cable Company (Pty) Limited	500 000	51%	—	121 000	912 074	805 622
Usco Housing (Richards Bay) (Pty) Limited	150 000	100%	128 837	150 000	31 927	12 677
Usko Huiseienaars (Pty) Limited	4	100%	—	41 954	1 811 701	1 565 641
Usco Aluminium Systems (Pty) Limited	100	100%	100	100	(100)	(100)
	3 850 104		3 432 328	3 756 489	7 007 161	2 533 279

Usco's interest in subsidiary companies is reflected at cost less provision for losses in subsidiaries.
The issued share capital of the subsidiaries and Usco's interest therein remained unchanged during the year.

Aggregate amount of Usco's share of profits and losses after tax in subsidiaries.	1974 R'000	1973 R'000
Aggregate profits of subsidiaries	957	105
Aggregate losses of subsidiaries	675	263

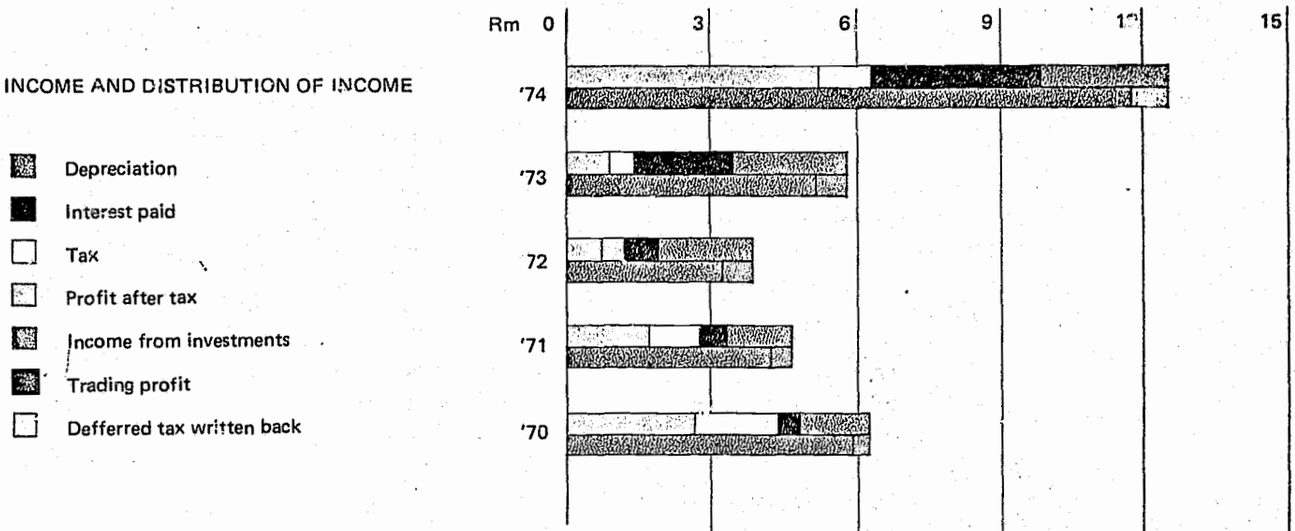
DIRECTORS' SHAREHOLDINGS

At 31st December, 1974, the directors and alternate directors of the Corporation beneficially held a total of 2 500 (1973 – 2 500) ordinary shares in the Corporation. On the same date their non-beneficial interests were 12 000 (1973 – 12 000) ordinary shares.

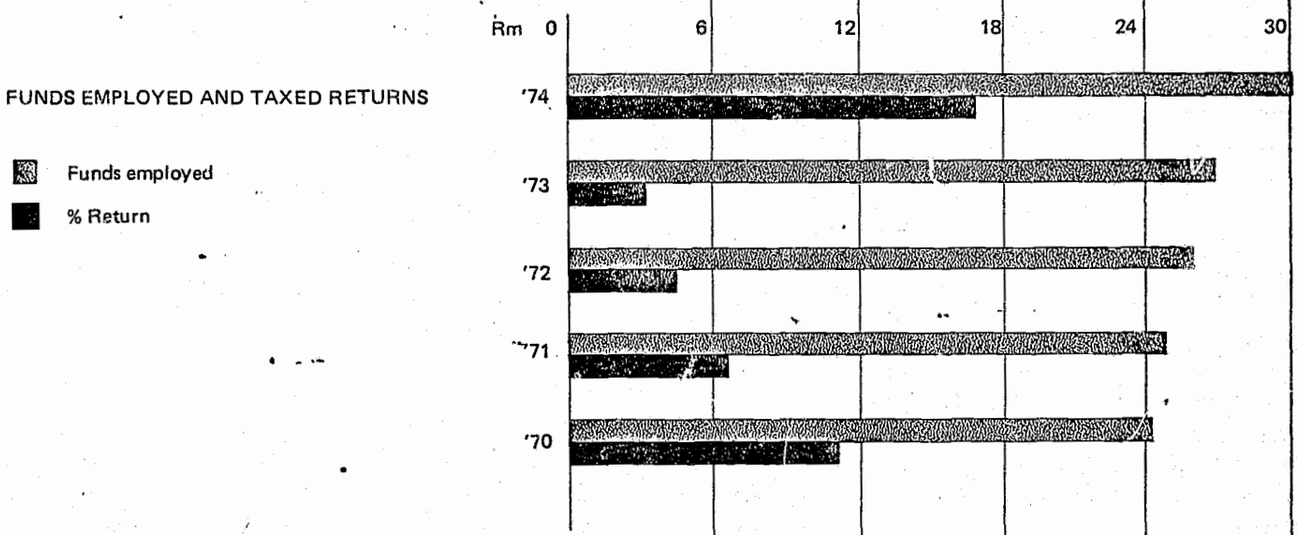
HOLDING COMPANY AND CONTROLLING COMPANY

The Corporation's holding company is Metkor Investments Limited by virtue of shareholding and Iscor is the Corporation's controlling company on the strength of the majority voting power vested in the preferent shares.

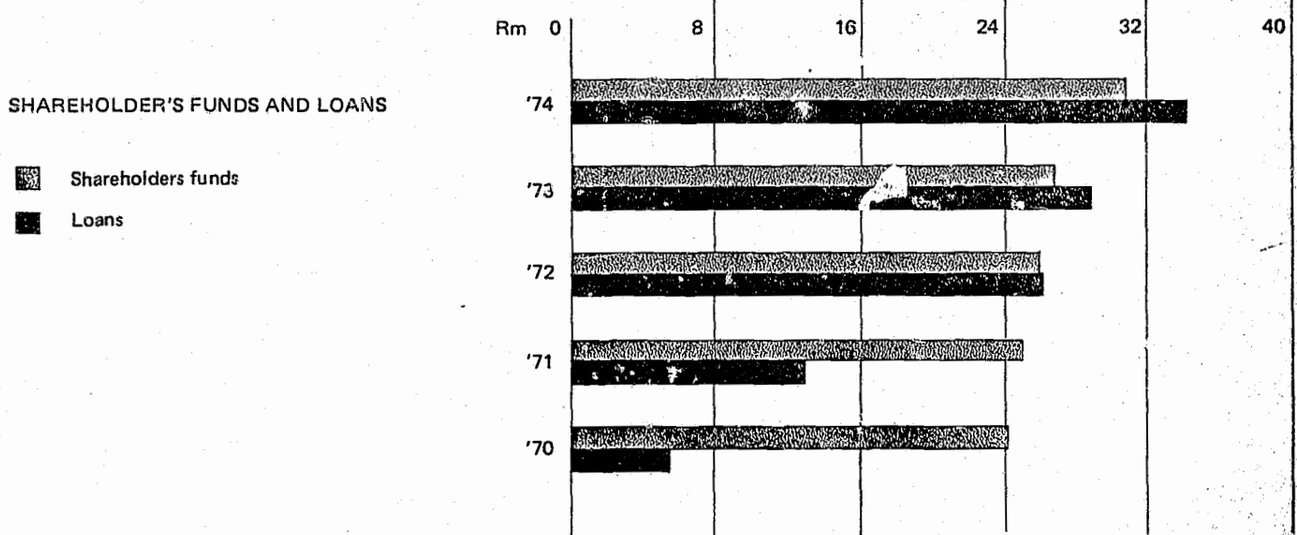
INCOME AND DISTRIBUTION OF INCOME



FUNDS EMPLOYED AND TAXED RETURNS



SHAREHOLDER'S FUNDS AND LOANS



Income Statement

FOR THE YEAR ENDED 31st DECEMBER, 1974

	Note	USCO 1974 R'000	USCO 1973 R'000	GROUP 1974 R'000	GROUP 1973 R'000
TURNOVER	1	**121 178**	**95 809**	**134 010**	**104 203**
OPERATING SURPLUS	14	**10 901**	**4 726**	**11 867**	**5 223**
Income from investments	16	586	549	586	549
Income from subsidiary companies	17	903	318	—	—
Depreciation		2 313	2 065	2 683	2 428
Interest paid on borrowings		3 397	1 883	3 522	2 002
PROFIT BEFORE TAXATION		**6 680**	**1 645**	**6 248**	**1 342**
Taxation	18	930	569	1 138	557
PROFIT AFTER TAXATION		**5 750**	**1 076**	**5 110**	**785**
Outside shareholders share of loss in a subsidiary		—	—	116	83
GROUP PROFIT		**5 750**	**1 076**	**5 226**	**868**
Retained income at beginning of the year		748	846	1 028	1 200
AVAILABLE FOR APPROPRIATION		**6 498**	**1 922**	**6 254**	**2 068**
Dividends	19	1 350	40	1 350	40
Provision for losses in subsidiary companies		469	134	—	—
Transfer to distributable reserves	4	4 000	1 000	4 000	1 000
RETAINED INCOME AT END OF THE YEAR		**679**	**748**	**904**	**1 028**

Balance Sheet

31st DECEMBER, 1974

	Note	USCO 1974 R'000	USCO 1973 R'000	GROUP 1974 R'000	GROUP 1973 R'000
CAPITAL EMPLOYED					
Ordinary share capital	2	14 505	14 505	14 505	14 505
Distributable reserves	3	15 491	11 560	15 807	11 914
ORDINARY SHAREHOLDERS' FUNDS		**29 996**	**26 065**	**30 312**	**26 419**
Preferent share capital	2	500	500	500	500
TOTAL SHAREHOLDERS' FUNDS		**30 496**	**26 565**	**30 812**	**26 919**
Outside shareholders' interest		—	—	—	116
Deferred taxation		1 484	619	1 657	619
Long-term borrowings	5	17 387	16 570	21 095	20 795
TOTAL CAPITAL EMPLOYED		**49 367**	**43 754**	**53 564**	**48 449**
EMPLOYMENT OF CAPITAL					
FIXED ASSETS	6	**24 472**	**23 200**	**31 078**	**29 963**
INVESTMENTS	8	**2 707**	**2 767**	**2 707**	**2 767**
SUBSIDIARY COMPANIES	9	**10 440**	**6 290**	—	—
LONG-TERM DEBTORS	10	—	—	**1 808**	**1 577**
CURRENT ASSETS					
Stock	11	20 195	13 859	24 300	16 064
Debtors		9 621	11 599	13 382	13 328
Funds at call and on deposit		1 384	—	1 490	106
Bank balances and cash		78	21	78	24
TOTAL CURRENT ASSETS		**31 278**	**25 479**	**39 250**	**29 522**
CURRENT LIABILITIES					
Bank overdraft		4 346	1 821	4 346	1 823
Short-term borrowings		8 163	6 000	8 667	6 501
Creditors		6 646	7 432	7 934	8 380
Shareholders for dividends		1 330	20	1 330	20
TOTAL CURRENT LIABILITIES		**20 485**	**15 273**	**22 277**	**16 724**
NET CURRENT ASSETS		**10 793**	**10 206**	**16 973**	**12 798**
DEFERRED EXPENDITURE	12	**955**	**1 291**	**998**	**1 344**
TOTAL EMPLOYMENT OF CAPITAL		**49 367**	**43 754**	**53 564**	**48 449**

CAPITAL EMPLOYED					
Ordinary share capital	2	14 505	14 505	14 505	14 505
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Notes to the Annual Financial Statements

31st DECEMBER, 1974.

1. ACCOUNTING POLICIES

1.1 Turnover

Turnover represents total net invoiced sales, excluding intercompany transactions.

1.2 Depreciation

Depreciation is provided over the expected useful lives of fixed assets on reducing balance or straight line method at rates which are calculated to reduce the book values of the assets to their estimated residual values.

1.3 Taxation

Normal taxation is determined on the profit for the year, after taking into account investment and initial allowances on capital expenditure, border area allowances and tax losses brought forward from prior years.

Deferred taxation is provided at current rates of taxation on the timing differences between the net book value of assets qualifying for taxation allowances, and their written down value for tax purposes.

1.4 Stock

The basis of valuation of stock is consistent with that of the previous year.

Raw materials and consumable stores are valued at the lower of cost (determined on the basis of first-in; first-out) or net realisable value.

Work in progress and finished goods are valued at standard cost (which includes raw materials, direct and indirect overhead expenses) and reduced to net realisable value where lower.

Provision is made for obsolete and slow moving stocks.

1.5 Foreign currency

Foreign assets and liabilities have been converted at rates of exchange approximating those ruling at 31st December, 1974.

	USCO		GROUP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
2. SHARE CAPITAL authorised, issued and fully paid				
125 000 Preferent "A" shares of R2 each	250	250	250	250
125 000 Preferent "B" shares of R2 each	250	250	250	250
	500	500	500	500
29 010 000 Ordinary shares of 50c each	14 505	14 505	14 505	14 505
	15 005	15 005	15 005	15 005
3. DISTRIBUTABLE RESERVES				
Reserve for replacement of fixed assets	7 552	4 552	7 603	4 586
General reserve	7 260	6 260	7 300	6 300
Retained income	679	748	904	1 028
	15 491	11 560	15 807	11 914
4. MOVEMENTS ON DISTRIBUTABLE RESERVES				
Transfer to reserve for replacement of fixed assets	3 000	1 000	3 000	1 000
Transfer to general reserve	1 000	—	1 000	—
	4 000	1 000	4 000	1 000
Excess provision for depreciation due to revaluation of plant in a subsidiary company transferred to reserve for replacement of fixed assets on consolidation	—	—	17	34
	4 000	1 000	4 017	1 034

1.2 Depreciation

Depreciation is provided over the expected useful lives of fixed assets on reducing balance or straight line method at rates which are calculated to reduce the book values of the assets to their estimated residual values.

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	500	500	500	500
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Transfer to general reserve	1 000	—	1 000	—
	4 000	1 000	4 000	1 000
Excess provision for depreciation due to revaluation of plant in a subsidiary company, transferred to reserve for replacement of fixed assets on consolidation	—	—	17	34
	4 000	1 000	4 017	1 034

	USCO		GROUP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
5. LONG-TERM BORROWINGS				
5.1 **Overseas loans**				
Revolving credit loan No. 1. The facility of this loan will decrease by fifty per cent on 6th February, 1977, and the balance on 6th February, 1978. Current effective interest rate 12,96 per cent per annum, reviewed three or six monthly. This loan is covered by a forward exchange contract and the effective interest rate includes the cost of this coverage	5 954	5 561	5 954	5 561
Revolving credit loan No. 2. This loan was redeemed during the year	—	5 376	—	5 376
Fixed term loan repayable in two equal instalments on 7th November, 1976, and 7th November, 1977. Effective interest rate 10 per cent per annum. This loan is covered by a forward exchange contract and the effective interest rate includes the cost of this coverage	5 633	5 633	5 633	5 633
5.2 **Local loans**				
Fixed term loan repayable in three equal annual instalments from 1st June, 1979. Interest rate 9,5 per cent per annum	4 000	—	4 000	—
Fixed term loan repayable in two equal instalments on 1st October, 1978 and 1st October, 1979. Interest rate 12,5 per cent per annum	1 800	—	1 800	—
5.3 **Border area loans to subsidiary companies guaranteed by Usco**				
No. 1 to a subsidiary company in respect of land and buildings, repayable in thirty-two equal quarterly instalments of R65 750. Interest free to 28th October, 1976 and thereafter at 6 per cent per annum	—	—	2 104	2 367
No. 2 to a subsidiary company in respect of plant and machinery, repayable in twenty-four equal quarterly instalments of R52 187. Interest at 4 per cent per annum to 28th October, 1976 and thereafter at 6 per cent per annum	—	—	1 253	1 461
Housing loans repayable in equal monthly instalments of R5 370 (including interest) over twenty years terminating 1992. Current interest rate 6 per cent per annum. These loans are secured by first mortgage bonds over housing properties	—	—	681	717
5.4 **Other housing loans**				
Secured – repayable in equal monthly instalments of R1 135 (including interest) terminating 1993. Current interest rate 10,5 per cent per annum. Secured by first mortgage bonds over housing properties	—	—	110	112
Unsecured – repayable in equal monthly instalments of R842 (including interest) terminating 1982. Interest rate 6,5 per cent per annum	—	—	63	69
	17 387	16 570	21 598	21 296
Less instalments repayable within one year included in short-term loans	—	—	503	501
	17 387	16 570	21 095	20 795

	USCO		GROUP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
6. FIXED ASSETS				
6.1 Cost				
Industrial property and improvements thereto	131	131	901	901
Industrial buildings and sidings	9 694	8 412	11 806	10 523
Properties leased to Usco Housing Company	267	267	267	267
Housing properties	—	—	990	940
Plant and machinery	37 981	28 196	41 833	31 914
Office furniture, equipment and motor vehicles	629	702	671	753
Capital extensions under construction	941	8 586	1 123	8 591
Patents	—	—	—	171
	49 643	46 294	57 591	54 060
6.2 Accumulated depreciation				
Industrial property and improvements thereto	79	79	79	79
Industrial buildings and sidings	4 491	4 255	4 754	4 429
Properties leased to Usco Housing Company	184	180	184	180
Housing properties	—	—	—	—
Plant and machinery	20 012	18 136	21 071	18 937
Office furniture, equipment and motor vehicles	405	444	425	472
Capital extensions under construction	—	—	—	—
Patents	—	—	—	—
	25 171	23 094	26 513	24 097
6.3 Book value				
Industrial property and improvements thereto	52	52	822	822
Industrial buildings and sidings	5 203	4 157	7 052	6 094
Properties leased to Usco Housing Company	83	87	83	87
Housing properties	—	—	990	940
Plant and machinery	17 969	10 060	20 762	12 977
Office furniture, equipment and motor vehicles	224	258	246	281
Capital extensions under construction	941	8 586	1 123	8 591
Patents	—	—	—	171
	24 472	23 200	31 078	29 963

6.4 Plant and buildings of certain subsidiary companies (book value R3 914 000; 1973 – R3 628 000) have been erected on land purchased by the subsidiary companies but which has not been registered in their names.

6.5 Housing properties with a book value of R683 000 (1973 – R688 000) are subject to first mortgage bonds in favour of housing loan creditors.

6.6 Fixed assets registers dealing with property and buildings are available for inspection by members or their duly authorised representatives at the registered office of the Corporation.

7. COMMITMENTS				
Capital expenditure contracted for	2 057	1 802	3 296	2 099
In addition the directors have authorised the purchase of buildings and plant for which contracts have not been entered into	4 160	783	4 798	815
All the above capital expenditure will be financed from additional loan facilities.				
	6 217	2 585	8 094	2 914

DIE UNIE STAALKORPORASIE (VAN SUID-AFRIKA) BEPERK
ALGEMENE JAARVERGADERING

Volmagvorm

Getal aandele
Gewone .....
Voorkeur B .....

Ek/Ons .....

van .....

synde 'n lid van die Korporasie stel hiermee aan:

.....of, indien nie hy nie,

.....of, indien nie hy nie,
die voorsitter van die vergadering, as my/ons gevolmagtigde om namens my/ons op die algemene jaarvergadering van die Korporasie, gehou te word op 2 Junie 1975 en enige verdaging daarvan, soos volg te stem:

	Ten gunste van	Teen	Buite stemming
1. Goedkeuring van finansiële jaarstate			
2. Leningsbevoegheid van direkteure			
3. Vergoeding van direkteure			

Datum .....

Handtekening .....

Bygestaan deur eggenoot.....

OPMERKINGS:

1. 'n Lid wat daarop geregtig is om aanwesig te wees en te stem, is geregtig om 'n gevolmagtigde in sy plek aan te stel om aanwesig te wees, te praat en te stem en sodanige gevolmagtigde hoef nie ook lid van die Korporasie te wees nie.
2. U kan met 'n X aandui hoe u verlang dat u stemme uitgebring moet word. Indien u dit nie aandui nie, kan die gevolmagtigde na sy goeddunke stem of buite stemming bly.
3. Volmagte moet minstens agt-en-veertig uur voor die vergadering by die geregistreerde kantoor van die Korporasie ingedien word.

THE UNION STEEL CORPORATION (OF SOUTH AFRICA) LIMITED
ANNUAL GENERAL MEETING

Form of Proxy

No. of shares
Ordinary .....
Preferent B .....

I/We, ...

of .....

being a member/s of the Corporation hereby appoint:

..... or failing him,

..... or failing him,

the chairman of the meeting as my/our proxy to vote for me/us and on my/our behalf at the annual general meeting of the Corporation to be held on the 2nd day of June, 1975 and at any adjournment thereof as follows:

	In favour of	Against	Abstain
1. Approval of annual financial statements			
2. Borrowing powers of directors			
3. Remuneration of directors			

Date .....

Signature .....

Assisted by husband .....

NOTES:

1. A member entitled to attend and vote is entitled to appoint a proxy to attend, speak and vote in his stead and such proxy need not also be a member of the Corporation.
2. You may indicate with a X how you wish your votes to be cast. If you do not do so, the proxy may vote or abstain as he thinks fit.
3. Proxies must be lodged at the registered office of the Corporation not less than forty-eight hours before the meeting.

	USCO		GROUP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
8. INVESTMENTS AT COST				
Listed				
National Bolts Limited 631 125 shares of 50 cents each (Market value: R631 000; 1973 – R757 000)	506	506	506	506
Unlisted				
Joint venture in Transvaal Copper Rod Company	940	900	940	900
African Aluminium Company (Pty) Limited	—	100	—	100
National Materials Service Corporation (Pty) Limited	750	750	750	750
Hall & Pickles (Coastal) (Pty) Limited	40	40	40	40
Veldmaster (Rhodesia) (Pvt) Limited	46	46	46	46
Alustang (Pty) Limited	425	425	425	425
(Directors' valuation of unlisted investments R2 201 000; 1973 – R2 261 000)				
	2 201	2 261	2 201	2 261
	2 707	2 767	2 707	2 767
9. SUBSIDIARY COMPANIES				
Shares at cost	3 891	3 891		
Amounts owing by subsidiaries	7 152	4 130		
	11 043	8 021		
Less provision for losses	603	134		
	10 440	7 887		
Less amounts owing to subsidiaries	—	1 597		
	10 440	6 290		
10. LONG-TERM DEBTORS				
Secured by mortgage bonds			426	573
Secured by hire purchase agreements			1 382	1 004
			1 808	1 577
These comprise amounts owing by employees in respect of housing properties sold under the Corporation's housing schemes and are repayable in monthly instalments over periods of up to twenty-five years.				
Certain properties are subject to first mortgage bonds in favour of housing loan creditors.				
11. STOCK				
Raw materials	7 279	4 346	9 355	5 327
Consumable stores	3 053	2 407	3 311	2 561
Work in progress	7 761	5 857	8 838	6 632
Finished goods	2 102	1 249	2 796	1 544
	20 195	13 859	24 300	16 064
12. DEFERRED EXPENDITURE				
Commissioning costs on new steel melting complex written off over five years from 1973	557	743	557	743
Exchange variances and management fees on long-term overseas loans written off over life of the loans	206	294	206	294
Other expenditure	192	254	235	307
	955	1 291	998	1 344

	USCO		GROUP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
13. CONTINGENT LIABILITIES				
Guarantees to building societies for employees housing loans	1 108	1 219	1 108	1 219
Outstanding calls on partly-paid shares in a subsidiary company	50	50	—	—
Guarantee of a loan granted to an associate company	450	450	450	450
14. OPERATING PROFIT				
The operating profit is arrived at after taking into account the items detailed below:				
Loss on sale of fixed assets	15	48	18	44
Auditors' remuneration – Audit	20	15	29	22
– Other services	2	1	2	1
Leasing of equipment	233	270	234	270
Secretarial services	33	32	33	32
15. DIRECTORS' EMOLUMENTS				
For services as directors	26	18		
For other services	35	8		
	61	26		
16. INCOME FROM INVESTMENTS				
Listed				
Dividends	75	63	75	63
Management fees	32	29	32	29
	107	92	107	92
Unlisted	479	457	479	457
	586	549	586	549
17. INCOME FROM SUBSIDIARY COMPANIES				
Dividends	500	50		
Interest	285	139		
Management fees	118	129		
	903	318		
18. TAXATION				
South African normal taxation	65	—	100	—
Deferred taxation – Current year	1 240	569	1 413	557
– Adjustment in respect of prior years	(375)	—	(375)	—
	930	569	1 138	557
19. DIVIDENDS				
Preferent "A" and "B" shares				
Paid 8 cents per share (4%)	20	20	20	20
Proposed 10 cents per share (5%) (1973: 16 cents per share 8%)	25	20	25	20
	45	40	45	40
Ordinary shares				
Proposed 4,5 cents per share (9%)	1 305	—	1 305	—
	1 350	40	1 350	40

Statement of source and application of funds

FOR THE YEAR ENDED 31st DECEMBER, 1974

	USCO R'000	GROUP R'000
SOURCE OF FUNDS		
Profit for the year	6 680	6 248
Depreciation and amounts written off	2 649	3 046
Funds derived from trading activities	**9 329**	**9 294**
Disposal of plant and equipment	39	46
Sale of housing properties to employees	—	489
Reduction in unlisted investments	60	60
Long-term loans raised	6 193	6 193
Total source of funds	**15 621**	**16 082**
APPLICATION OF FUNDS		
Purchase of buildings, plant and equipment	3 624	3 825
Purchase of housing properties	—	508
Repayment of long-term loans	5 376	5 893
Increase in interest in subsidiary companies	4 619	—
Increase in long-term debtors	—	231
Taxation	65	100
Dividends	1 350	1 350
Net increase in working capital	587	4 175
Total application of funds	**15 621**	**16 082**
CHANGES IN WORKING CAPITAL		
Increase stock	6 336	8 236
Increase funds at call	1 384	1 385
Increase bank and cash	57	54
Decrease creditors	786	446
Increase in working capital	**8 563**	**10 121**
Decrease debtors	1 978	(53)
Increase bank overdraft	2 525	2 523
Increase shareholders for dividends	1 310	1 310
Increase short-term borrowings	2 163	2 166
Decrease in working capital	**7 976**	**5 946**
Net increase in working capital	**587**	**4 175**

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Decrease in working capital	**7 976**	**5 946**
Net increase in working capital	**587**	**4 175**

Group Five Year Review

	1974	1973	1972	1971	1970
OPERATING RESULTS (R000's)					
Steel sales	55 996	44 532	32 615	31 067	28 911
Copper and aluminium sales	78 014	59 671	44 284	39 367	45 911
Total sales	134 010	104 203	76 899	70 434	74 822
Profit before tax	6 364	1 425	751	2 735	4 407
Tax and deferred tax	1 138	557	(425)	1 076	1 747
Profit after tax	5 226	868	1 176	1 659	2 660
Extraordinary income	17	34	—	—	235
Dividends	1 350	40	40	983	1 350
Retained income (for the period)	3 893	862	1 136	676	1 545
Distributable reserves	15 807	11 914	11 052	9 916	9 240
Ordinary share capital	14 505	14 505	14 505	14 505	14 505
Preferent share capital	500	500	500	500	500
Shareholders' funds	30 812	26 919	26 057	24 921	24 245
FINANCIAL DETAILS (R000's)					
Current assests	39 250	29 522	29 840	25 433	21 982
Current liabilities	22 277	16 724	10 725	11 987	7 008
Working capital	16 973	12 798	19 115	13 446	14 974
Other assets	5 513	5 688	5 337	3 352	2 397
Net fixed assets	31 078	29 963	24 018	15 95[illegible]	10 764
Long-term liabilities	22 752	21 530	22 413	7 82[illegible]	3 890
Shareholders' funds	30 812	26 919	26 057	24 921	24 245
SOURCE OF FUNDS					
Shareholders' funds	40,6	41,3	44,1	55,7	69,0
Long-term liabilities	30,0	33,0	37,9	17,5	11,1
Current liabilities	29,4	25,7	18,0	26,8	19,9
	100,0%	100,0%	100,0%	100,0%	100,0%
APPLICATION OF FUNDS					
Debtors	17,7	20,2	17,5	19,2	20,6
Stock	32,0	24,6	24,1	36,4	34,0
Net fixed assets	41,0	46,0	40,6	35,7	30,6
Other assets	9,3	9,2	17,8	8,7	14,8
	100,0%	100,0%	100,0%	100,0%	100,0%
KEY DATA					
Salaries and wages (R000's)	18 470	15 519	12 651	11 898	10 512
Number of employees	6 030	5 931	5 697	5 315	5 336
Number of ordinary shares (000's)	29 010	29 010	29 010	29 010	29 010
Cash flow (R000's)	9 294	3 923	2 760	2 991	4 162
Earnings per ordinary share	17,86c	2,85c	3,92c	5,58c	9,01c
Dividends per ordinary share	4,50c	—	—	3,25c	4,50c
Retained income per ordinary share	13,36c	2,85c	3,92c	2,33c	4,51c
Net worth per ordinary share	104,49c	91,06c	88,10c	84,18c	81,85c
Dividend cover	4,0	—	—	1,7	2,0
Current ratio	1,8:1	1,8:1	2,8:1	2,1:1	3,1:1
Taxed profit to shareholders' funds	17,0%	3,2%	4,5%	6,6%	11,0%
Sales (growth)	28,6%	35,5%	9,2%	(5,9%)	12,4%
Shareholders' funds (growth)	14,5%	3,3%	4,6%	2,8%	6,8%

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Copper and aluminium sales	78 014	59 671	44 284	39 367	45 911
Total sales	134 010	104 203	76 899	70 434	74 822
Profit before tax	6 364	1 425	751	2 735	4 407
Tax and deferred tax	1 138	557	(425)	1 076	1 747
Profit after tax	5 226	868	1 176	1 659	2 660
Extraordinary income	17	34	—	—	235
Dividends	1 350	40	40	983	1 350
Retained income (for the period) ...	3 893	862	1 136	676	1 545
Distributable reserves	15 807	11 914	11 052	9 916	9 240
Ordinary share capital	14 505	14 505	14 505	14 505	14 505
Preferent share capital	500	500	500	500	500
Shareholders' funds	30 812	26 919	26 057	24 921	24 245

FINANCIAL DETAILS (R000's)

Current assests	39 250	29 522	29 840	25 433	21 982
Current liabilities	22 277	16 724	10 725	11 987	7 008
Working capital	16 973	12 798	19 115	13 446	14 974
Other assets	5 513	5 688	5 337	3 352	2 397
Net fixed assets	31 078	29 963	24 018	15 951	10 764
Long-term liabilities	22 752	21 530	22 413	7 828	3 890
Shareholders' funds	30 812	26 919	26 057	24 921	24 245

SOURCE OF FUNDS

Shareholders' funds	40,6	41,3	44,1	55,7	69,0
Long-term liabilities	30,0	33,0	37,9	17,5	11,1
Current liabilities	29,4	25,7	18,0	26,8	19,9
	100,0%	100,0%	100,0%	100,0%	100,0%

APPLICATION OF FUNDS

Debtors	17,7	20,2	17,5	19,2	20,6
Stock	32,0	24,6	24,1	36,4	34,0
Net fixed assets	41,0	46,0	40,6	35,7	30,6
Other assets	9,3	9,2	17,8	8,7	14,8
	100,0%	100,0%	100,0%	100,0%	100,0%

KEY DATA

Salaries and wages (R000's)	18 470	15 519	12 651	11 898	10 [illegible] 2
Number of employees	6 030	5 931	5 697	5 315	5 336
Number of ordinary shares (000's)	29 010	29 010	29 010	29 010	29 010
Cash flow (R000's)	9 294	3 923	2 700	2 991	4 162
Earnings per ordinary share	17,86c	2,85c	3,92c	5,58c	9,01c
Dividends per ordinary share	4,50c	—	—	3,25c	4,50c
Retained income per ordinary share	13,36c	2,85c	3,92c	2,33c	4,51c
Net worth per ordinary share	104,49c	91,06c	88,10c	84,18c	81,85c
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Current ratio	1,8:1	1,8:1	2,8:1	2,1:1	3,1:1
Taxed profit to shareholders' funds	17,0%	3,2%	4,5%	6,6%	11,0%
Sales (growth)	28,6%	35,5%	9,2%	(5,9%)	12,4%
Shareholders' funds (growth)	14,5%	3,3%	4,6%	2,8%	6,8%

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Jaarverslag 1974

DIE UNIE STAAL-KORPORASIE (VAN SUID-AFRIKA) BEPERK

Die Unie Staalkorporasie

(VAN SUID-AFRIKA) BEPERK

(met regspersoonlikheid in die Republiek van Suid-Afrika)

Drie-en-sestigste Jaarverslag 1974

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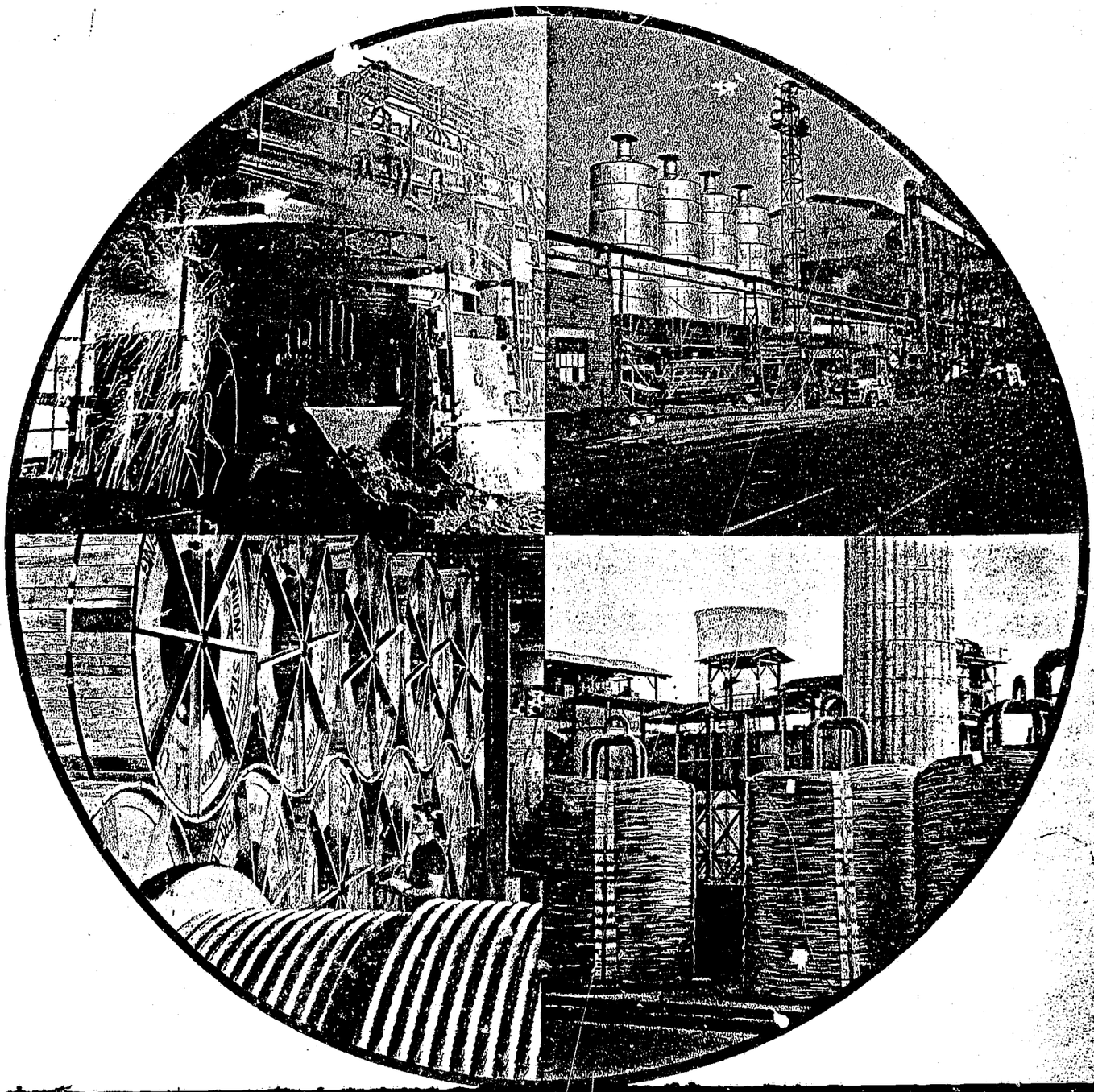
USKO

Die Usko-groep vervaardig sagte- en spesiale staalprofiele, gietstukke, landbouskottels en grondslytende onderdele, koperdraad en aluminium oorhoofse geleier.
Usko het verder belange in staalhandelaars en verskaffers van koper- en aluminiumstang.
Usko se aandele is op die aandelebeurse van Johannesburg en London genoteer.



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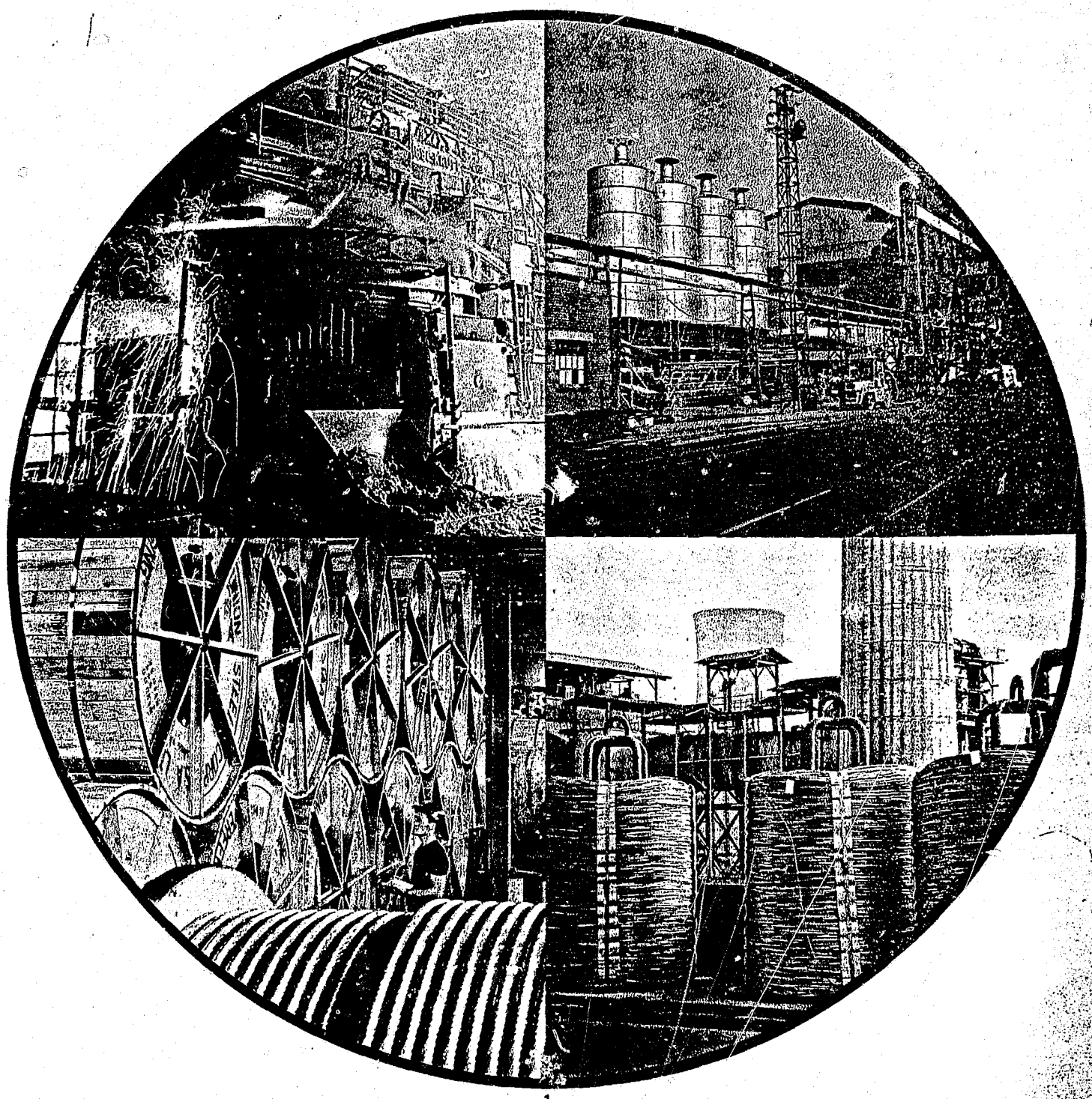

Direkteure en Bestuur

Direkteure
Dr. M. D. Marais (Voorsitter)
Prof. H. J. Samuels (Adjunk-Voorsitter)
J. P. Coetzee
E. P. Gush
W. J. Hefer
Prof. P. W. Hoek
H. C. H. Hutten (Uitvoerende-Direkteur)
S. B. Kossuth

Alternatiewe Direkteure
H. J. Barnard
M. W. King
M. C. O'Dowd
D. J. Ritson

Uitvoerende Beamptes
J. C. de Waal (Hoofbestuurder)
Dr. F. W. Güldenpfennig (Afdelingsbestuurder: Staalvervaardiging)
D. C. Odendaal (Afdelingsbestuurder: Finansies en Administrasie)
J. C. Steenkamp (Afdelingsbestuurder: Personeeldienste)
J. U. van Wyk (Afdelingsbestuurder: Usko Filiale)
J. H. Vorster (Tegniese Bestuurder)

Sekretaris
R. J. van Jaarsveld,
Posbus 48,
Generaal Hertzogweg,
Vereeniging 1930.

London-Sekretarisse
Anglo-American Corporation
of South Africa Limited,
40 Holborn Viaduct,
London, E.C.1.

Oordrag-Sekretarisse
Consolidated Share Registrars
Limited,
Marshallstraat 62, Johannesburg 2000.

Bankiers
Barclays-Nasionale Bank Beperk
Volkskas Beperk

Ouditeure
Deloitte & Kie., Johannesburg

Geregistreerde Kantoor
Posbus 48, Generaal Hertzogweg, Vereeniging 1930.

Kennisgewing van Vergadering

KENNIS WORD HIERMEE GEGEE dat die drie-en-sestigste gewone algemene vergadering van aandeelhouers van die Korporasie gehou sal word in die Raadsaal van die Korporasie, Generaal Hertzogweg, Vereeniging, op 2 Junie 1975 om 12h00 vir behandeling van die volgende sake:

1. Om die finansiële jaarstate vir die jaar geëindig 31 Desember 1974, te ontvang en te oorweeg.

2. **Spesiale sake:**
   Om die volgende besluite te oorweeg en met of sonder wysiging, goed te keur:

   2.1. **Gewone besluit**
   Dat die Direkteure hiermee gemagtig word en is om namens die Korporasie lenings aan te gaan tot 'n bedrag wat gesamentlik op enige stadium nie R50 000 000 sal oorskry nie.

   2.2. **Gewone besluit**
   Dat die Direkteure as vergoeding vir dienste gelewer uit die fondse van die Korporasie elk 'n bedrag van R3 000 per jaar betaal sal word, terwyl die Voorsitter van die Raad van Direkteure 'n addisionele bedrag van R2 000 per jaar betaal sal word, met inwerkingtreding vanaf 1 Januarie 1974.

3. Om enige ander sake, wat deur 'n gewone algemene vergadering van aandeelhouers van die Korporasie afgehandel kan word, af te handel.

'n Aandeelhouer met 'n gewone stem en wat gemagtig is om die bogenoemde vergadering by te woon, is geregtig om 'n gevolmagtigde in sy plek te stuur wat namens hom kan stem en praat.

Dit is nie nodig dat so 'n gevolmagtigde 'n aandeelhouer van die Korporasie is nie. Aandeelhouers wat verlang dat gevolmagtigdes hulle op die vergadering verteenwoordig, moet die Korporasie se geregistreerde kantoor of sy Londonse kantoor, nie later nie as 48 uur voor datum van die vergadering, daarvan in kennis stel. Die oordragregisters van die Korporasie, beide te Johannesburg en London, sal gesluit wees vanaf 26 Mei 1975 tot 2 Junie 1975, albei datums ingesluit.

Namens die Raad,
R. J. VAN JAARSVELD,
Sekretaris.

18 Februarie 1975.

E. P. Gush
W. J. Hefer
Prof. P. W. Hoek
H. C. H. Hutten (Uitvoerende-Direkteur)
S. B. Kossuth

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Namens die Raad,
R. J. VAN JAARSVELD,
Sekretaris.

18 Februarie 1975.

In view of the particular circumstances relating to the Eastern Cape and Cape Midlands areas, the Unit conducted orientation presentations on Black trade union development and participation for members of the East London Engineers and Founders Employers' Association and the Port Elizabeth Engineers' Association respectively during August, 1980 along with individual consultations with certain member companies in these regions.

IN-PLANT COMMITTEE SYSTEMS:

Consequent upon the recommendations of the Wiehahn Commission and related Government White Paper, the prospect arose of amended industrial legislation providing for, inter alia, the establishment of works councils at individual plant level. Member companies have, in anticipation of these amendments, requested consultation with the Unit to restructure their existing liaison/works committees, or disband them in favour of the establishment of joint consultative committees and/or works councils on a multiracial basis. During 1980 a number of member companies have successfully established such committees with the co-operation of all their employees.

The SEIFSA Black Liaison Officers have assisted in this process through orientation and feedback sessions with Black employees in the companies concerned.

MANAGEMENT TRAINING IN INDUSTRIAL RELATIONS:

The Unit has continued to participate in training programmes run by SEIFSA Communications Unit, both on an in-company basis and in respect of courses offered at central venues throughout the Republic.

SEIFSA BLACK LABOUR AFFAIRS CENTRAL COMMITTEE:

The Central Committee continued to meet during the year to consider matters in the field of administration of Black affairs, legislation, benefit fund arrangements, training, housing, transport and industrial relations and to advise the SEIFSA Board of Management, Council, constituent associations and coastal divisions on items of principle relating thereto.

The Central Committee established a Working sub-Group to investigate and monitor the development and establishment of technical training facilities for Blacks in various regions of the Republic and in Soweto in particular.

TECHNICAL TRAINING FACILITIES FOR BLACKS IN SOWETO:

As directed by the SEIFSA Board of Management and Council, liaison has been maintained with the Department of Education and Training on the projected programme for the establishment of technical colleges and technical institutes in various regions of the Republic, and the position continues to be monitored at this level. In parallel with this a Working sub-Group of the Black Labour Affairs Central Committee has conducted investigations at various technical training centres in Soweto such as Jabulani, George Tabor and Molapo. The requirements for teachers in the field of mathematics and science in liaison with the Teachers Training College at Orlando West and other agencies were examined with a view to emphasising the requirements of the metal and engineering industries and to promote compatible developments in this field.

COMMITTEE OF INQUIRY INTO UNIVERSITY AND RELATED POST-SECONDARY SCHOOL TRAINING FOR BLACKS IN THE WHITE AREAS OF SOUTH AFRICA:

The outcome of the findings of the Committee of Inquiry, originally anticipated for publication not later than February, 1980, has been delayed until the latter part of 1980 following consideration of the recommendations of the Committee by the Minister of Education and Training. The delay can partly be ascribed to the publication of Part 2 of the Wiehahn Commission's Report which, inter alia, dealt with education and training, and the transfer of responsibility for certain categories of education and training to other Government departments.

HOME OWNERSHIP:

The Federation continued to monitor the implementation of home ownership provisions under 99-year leasehold tenure with a view to introducing a pilot scheme for Black employees in the industry through investment of monies from the Metal Industries Group Pension Fund in a building society to provide collateral financing of home ownership loans prior to expanding the provisions of the scheme on a wider basis.

The initial difficulties regarding the regulations governing site survey and the provisions for general plans, which hampered home ownership schemes, have largely been resolved through the medium of joint consultation at the level of the Umbrella Committee of the Association of Building Societies of South Africa, on which SEIFSA participates. Although the regulations have been simplified, the number of available stands for home ownership under the 99-year leasehold scheme has been limited to certain Black townships and regions, but mainly to Soweto.

Another inhibiting factor has been the high on-cost of providing infrastructural facilities as well as the high cost of loan repayments under 99-year leasehold which limits participation to Blacks in the high income groups. The aforegoing factors have militated against introducing the proposed pilot scheme through the investment of monies from the Metal Industries Group Pension Fund, but the situation continues to be monitored in liaison with the Association of Building Societies.

SEIFSA was instrumental in resolving the question with the East Rand Administration Board of according home ownership rights on the basis of ethnic grouping only in the Tembisa area following complaints received from Black employees in member companies in that region.

PHYSICAL PLANNING BILL, 1980:

The anticipated amendments to Section 3 of the Environmental Planning Act, which provided for the maintenance of fixed quotas of Blacks which may be employed in specified areas, mainly the PWV area of the Transvaal, were monitored following the recommendation of the Riekert Commission and related Government White Paper, and representations by the Federation have been made at the level of the Prime Minister's Economic Advisory Council to ensure that positive progress is made, particularly to accommodate the entry of Black employees into higher paid job categories following the removal of job reservation in the metal and engineering industries and job advancement on a non-discriminatory basis in terms of Section 35 of the Main Industrial Agreement following joint consultation at individual plant level.

POTCHEFSTROOM UNIVERSITY FOR CHRISTIAN HIGHER EDUCATION — VAAL RIVER BRANCH:

SEIFSA participated, by invitation of the University, at a symposium in April, 1980 on "Manpower Utilisation — Demands and Challenges of the Eighties". SEIFSA's contribution concerned the effects of industrial legislation, particularly amendments to the Industrial Conciliation Act effective from 1st October, 1979 on labour relations and, within this context, the indicated requirements of Black trade union development and participation and effective Black employee/management communication and consultative processes at individual plant level.

NATIONAL CONFERENCE OF THE SOUTH AFRICAN INSTITUTION OF CIVIL ENGINEERS:

SEIFSA participated, by invitation, at the Conference in July, 1980, the theme of which was "The quality of life of our future towns — services hold the key". The Conference considered all aspects of future urban community requirements, irrespective of the population groups involved, but with considerable emphasis on the needs of the Black urban residential areas.

NATIONAL AFRICAN FEDERATED CHAMBER OF COMMERCE (NAFCOC):

The Federation continued to participate on the NAFCOC Education sub-Committee which develops and promotes training courses for Black entrepreneurs in urban residential areas.

SEIFSA also participated on the NAFCOC ad hoc Committee which was established to examine the possibility of creating a Council for Economic Co-operation and Development in Southern Africa the outcome of which has not been finalised.

BLACK ADMINISTRATION:

Matters concerning the administration of Black affairs continued to be monitored by the SEIFSA Black Labour Affairs Central Committee particularly in regard to desirable changes recommended by the Riekert Commission and the related Government White Paper.

Contingent amendments to legislation and regulations have been monitored including, inter alia, the provisions of the Black Labour (Transfer of Functions) Act, 1980, passed during the 1980 parliamentary session. The transfer and control under this Act of Black employment in terms of the Black Labour Act and regulations from the Department of Co-operation and Development to the Department of Manpower Utilisation is in line with the Riekert Commission's recommendations and SEIFSA's submissions to the Commission.

URBAN FOUNDATION:

The Federation continued to maintain liaison with the Foundation on housing, home improvement, education and training and community facilities in Black urban residential areas.

The Foundation's participation in adult education and training programmes for urban Blacks at the Chamdor Public In-Service Training Centre has been well supported and liaison has also been maintained through the medium of the Association of Building Societies of S.A. on the Foundation's participation in promoting home ownership in areas for urban Blacks in terms of 99-year leasehold tenure.

IN-SERVICE TRAINING FOR BLACKS:

(i) **Co-ordinating Council:**

SEIFSA continues to participate on the Council which co-ordinates and controls training in the Public In-Service Training Centres throughout the Republic and advises the Minister of Education and Training on matters of policy relating thereto. Expansion of facilities at Public Centres and the rationalisation of contingent capital expenditure has been evaluated by the Council during the past year, particularly in relation to the future role of the centres in line with the recommendations of the Riekert Commission and related Government White Paper, the second report of the Wiehahn Commission and the deliberations of the sub-Committee of the National Manpower Commission concerned with the co-ordination of training. Officials of the Department of Education and Training concerned with Black

in-service training were transferred to the Department of Manpower Utilisation with effect from 1st June, 1980 in conformity with the recommendations of the Riekert Commission as accepted by the Government and in anticipation of the consolidation of the Black Employees' In-Service Training Act, 1976 and the In-Service Training Act, 1979 relating to the other population groups. The provisions for such consolidation are currently under consideration and SEIFSA will make recommendations in this respect in accordance with the requirements of the metal and engineering industries within the framework of education and training agreements negotiated under the industrial council system.

(ii) **Public In-Service Training Centres:**

Participation by the private sector at the various Public In-Service Training Centres situated at Pinetown, Emthonjeni (Port Elizabeth), Boithusong (Bloemfontein), Waltloo (Pretoria), Apex (Benoni), Sebokeng (Vereeniging), and Chamdor (Krugersdorp) has increased during 1979/80 mainly due to the expansion of training facilities and diversification of training courses for Blacks. Constituent associations within SEIFSA and certain member companies have negotiated training facilities with modular courses appropriate to their needs at Chamdor, Sebokeng, Apex and Boithusong and donated equipment and seconded training instructors in certain instances.

The imposition of levies on employers is currently in force at Emthonjeni and Boithusong.

"Manpower 2000" has also given attention to the better utilisation of the Public Centres as considered at a Conference held at the Chamdor Centre during August, 1980.

(iii) **Private In-Company Training Schemes and Private Training Centres:**

The SEIFSA Black Labour Unit has continued to assist member companies to obtain registration of their in-company training schemes and, in the case of the South African Reinforced Concrete Engineers' Association, assisted with the registration of a private training centre at Groblersdal in the Transvaal.

COMMUNICATIONS UNIT

The main objective of the Communications Unit is to provide training, information and advice which will assist member companies to build and maintain sound industrial relations. The Unit conducted industrial relations training courses at public venues and on an in-company basis, produced industrial relations information specific to the metal and engineering industries, and consulted with and advised member companies on industrial relations training.

SEIFSA INDUSTRIAL RELATIONS AND COMMUNICATIONS ADVISORY COMMITTEE:

The Advisory Committee was expanded during the year to include representatives of the trade union parties to the Metal and Engineering Industries Education and Training Fund Supplementary Scheme. Regular meetings of the Committee were held to review the activities of the Unit and to plan future development.

MANAGEMENT PRESENTATIONS:

The Unit, together with the SEIFSA Black Labour Unit, gave presentations to managers of member companies which had requested information on the general aspects of industrial relations. On average three presentations per month were given, and less formal consultations also took place regularly.

LIAISON COMMITTEE ORIENTATION AND TRAINING:

Together with the Black Labour Unit, the Communications Unit provided orientation for managers and formal training for elected members in the effective functioning of Liaison Committees, as follows:

Orientation Presentation for Senior Management:

Consisting of a prepared talk lasting approximately 1½ hours and the screening of a short audiovisual presentation. This presentation emphasises the importance of senior management's commitment to the committee system and the need for thorough training of liaison committee members.

Orientation Presentation for Supervisory Management:

This presentation clarifies the role of the liaison committee and the necessity for supervisors to co-operate with and participate in the committee system.

Liaison Committee Training Course:

Designed for Black liaison committee members and lasting four days, this course provides delegates with the knowledge and basic skills necessary to become effective liaison committee members. Topics covered include:

- The purpose of liaison committees
- Industrial legislation
- Liaison committee constitution
- In-company policies and procedures
- Business acumen
- Negotiating skills

The course is available at In-Service Training Centres throughout the Republic, and also on an in-company basis. As the course has been approved by the Co-ordinating Council for the In-Service Training of Black Employees, companies who send delegates to the course at In-Service Training Centres qualify for the relevant tax concessions.

In the latter half of the year, the SEIFSA Industrial Relations and Communications Advisory Committee recommended that the course be retitled "Works Council Training" and revised accordingly. Revision will be completed when the role of Works Councils has been defined and structured by legislation along the lines set out in the Government White Paper following the Wiehahn Report, Part 1.

Monitoring Committee Effectiveness:

A checklist for monitoring committee effectiveness is available to member companies on request, at no charge.

MANAGEMENT TRAINING:

Two-day industrial relations training courses were run at public venues throughout the year, in association with the Institute for Industrial Relations. Courses offered were as follows:

In-company Industrial Relations course:

For plant and divisional managers, this course outlines and analyses components of effective in-company industrial relations.

Shopfloor Industrial Relations course:

Designed for supervisors, this course identifies the role of supervisors and foremen in the current system of industrial relations. The popularity of the course is such that all courses held at public venues were fully booked well in advance, and additional courses were run to accommodate the increased demand. Five courses were also conducted on an in-company basis for individual member companies.

Industrial Relations Structures course:

Aimed at industrial relations and personnel managers and officers, this course outlines a practical framework for establishing and maintaining sound in-company industrial relations structures.
A total of 142 delegates attended the various courses held at public venues during the year.

HANDBOOK FOR SHOPSTEWARDS AND SUPERVISORS:

A summary in layman's language of the Main Agreement of the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry was prepared during the year to provide a reference for shopstewards and supervisors in the work situation.

TECHNICAL DIVISION

TECHNICAL SCHEDULES FOR INDUSTRIAL AGREEMENTS:

Negotiations during the year have covered the revision of a number of technical schedules in both the published and house agreements. In particular, negotiations are proceeding in connection with the proposed conversion of Division D/14 of the Main Agreement to an "E" Schedule related to the fabrication, installation and repair of plastic products (including reinforced plastics). An amendment to Division D/13, relating to electric lighting manufacturing and assembling, is still awaiting negotiation to include the manufacture of incandescent lamps, which was previously excluded from the scope of the Main Agreement.

METRICATION:

The Metrication Advisory Board has presented its final report to the Minister of Industrial Affairs and Trade and Consumer Affairs. General matters of principle related to metrication will in future be handled by a joint committee of the Council for Scientific and Industrial Research and the South African Bureau of Standards. It is anticipated that the private sector will also participate on this Committee. The handling of routine matters related to metrication will continue to be dealt with by the South African Bureau of Standards.

STANDARDISATION:

South African Bureau of Standards

SEIFSA continued giving active support to the work of the Standards Industrial Liaison Committee during the past year and all activities of the Bureau have been reviewed at its regular meetings.

SEIFSA representatives participate in the work of the technical committees established to prepare new standard specifications and codes of practice, and to revise existing ones.

The following table summarises developments during the year in regard to specifications and codes of practice relevant to the metal and engineering industries:—

- 33 new and revised standard specifications and codes of practice published.
- 34 amendments issued.
- 27 draft specifications and codes of practice circulated for comment.
- 16 questionnaires on need for new projects circulated.
- 24 new technical committees established.

Details of these were published in the SEIFSA Bulletin.

Quality Management

Following the publication of the Code of Practice No. SABS 0157-1979, this subject has received much attention, particularly in the area of planning

for technikons to train specialists by short intensive courses in this field. The SEIFSA Quality Management sub-Committee has been addressed by an overseas specialist, and regularly monitors progress in the field. The establishment of a National Calibration Service at the CSIR has assisted by providing registration of approved calibration services, including certain facilities at SEIFSA member firms. SEIFSA established useful contacts with overseas bodies specialising in quality control and arising therefrom SEIFSA has been accorded Associate Membership of the U.K. Institute of Quality Assurance and Sustaining Membership of the American Society for Quality Control.

South African I.S.O. and I.E.C. Committees

SEIFSA representatives participate in the work of many of these Committees. Details of documents received and publications available are published in the SEIFSA Bulletin.

Design Institute

Liaison with the Institute is maintained regularly. SEIFSA members have again featured as recipients of awards and commendations in the SHELL annual competition for industrial design.

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH:

The working group consisting of SEIFSA and CSIR representatives has met regularly and arising from its proceedings arrangements have been made for:

— A joint SEIFSA/CSIR mission to Taiwan and Israel to study the application of innovation in industry in these countries with special reference to training and creation of employment opportunities.

— The Technical Services Department of the CSIR organised a seminar on "Machining more efficiently" on 13th November, 1979, which was attended by some 450 delegates, many from SEIFSA member companies. The keynote address was given by the President of SEIFSA.

— Visits to CSIR facilities have been arranged for a number of SEIFSA delegations. A recent appointment by the CSIR of a SEIFSA Liaison Co-ordinator is aimed at maintaining and improving contact between individual SEIFSA members and the CSIR.

— SEIFSA representation on the Committees of the National Building Research Institute dealing with the optimum indoor environment for industry and solar energy and energy conservation has continued.

NATIONAL PRODUCTIVITY INSTITUTE:

SEIFSA is represented on the Productivity Advisory Council of the Institute. It is gratifying to note that SEIFSA members have featured among the winners of awards in the annual productivity competition organised by the Institute.

LEGISLATIVE MATTERS:

Consideration has been given and representations made in respect of the following:—

Factories Machinery and Building Work Act (1941)

— Proposed revision of Regulations relating to the working environment and facilities for employees.

— Proposed revision of Regulations relating to boilers.

Professional Engineers Act (1968)

Proposed provisions for exemptions, which would, as drafted, have imposed severe additional requirements on industrial organisations undertaking work reserved in terms of the Act for professional engineers.

DEPARTMENT OF STATISTICS — DIRECTORY OF PRODUCTS MANUFACTURED IN THE REPUBLIC:

SEIFSA's assistance has been sought in the revision of this Directory on which the next Industrial Census will be based. A number of suggested amendments have been submitted to and welcomed by the Department.

EDUCATION AND TRAINING DIVISION

SEIFSA TECHNOLOGICAL FUND:

The demand on the Fund for the establishment and promotion of education and training within the metal and engineering industries remained high. In order to increase the number of bursaries payable and the value of such bursaries, contributions to the Fund were increased as from 1st July, 1980. This was the first adjustment in contributions since the inauguration of the Fund in 1963.

TECHNICIAN TRAINING:

Bursaries were awarded to students taking the courses for the National Diploma for Technicians. The distribution of bursaries in the approved courses at technikons was as follows:—

Cape	77
Mangosuthu	5
M.L. Sultan	8
Natal	56
Peninsula	7
Port Elizabeth	15
Pretoria	57
Vaal Triangle	87
Witwatersrand	150
Total	462

Mangosuthu is the first technikon offering courses exclusively to Blacks for which SEIFSA bursaries are available.

Although 19 courses qualify for bursaries the breakdown of awards into disciplines is as follows:—

Analytical Chemistry	1
Civil Engineering	19
Electrical Engineering (Heavy Current)	47
Electrical Engineering (Light Current)	146
Industrial Engineering	2
Industrial Instrumentation	16
Mechanical Draughting	7
Mechanical Engineering	167
Metallurgical Engineering	32
Production Engineering	18
Refrigeration & Ventilation	1
Structural Draughting	1
Welding Technology	5
Total	462

Bursaries for study in the technician diploma courses have been increased from R360 to R450 per semester and from R240 to R300 per trimester.

TRAINING OF ADMINISTRATIVE PERSONNEL:

Bursaries were awarded to selected students who enrolled for the National Diploma in Cost Accounting, National Diploma in Electronic Data Processing and Systems Analysis and the National Certificate for Supervisory Management. The distribution of bursaries at the technikons was as follows:

Natal	5
M.L. Sultan	1
Pretoria	3
Vaal Triangle	1
Witwatersrand	26
Total	36

UNIVERSITY FIRST DEGREE BURSARIES:

Awards were made to students registered in approved courses at universities as under:—

Durban Westville	1
Cape Town	7
Natal	5
O.F.S.	1
Port Elizabeth	2
Pretoria	5
Stellenbosch	5
Witwatersrand	12
Total	38

SEIFSA POST-GRADUATE OVERSEAS RESEARCH SCHOLARSHIP:

The value of this scholarship has been increased from R3 000 to R4 000 per academic year. No award was made for the 1980/1981 academic year. The award for 1979/1980 was for an M.Sc degree in the field of the application of microprocessors in industry in the controlled environment.

BURSARIES:

The value of bursaries for study at South African universities was increased during the year from R1 200 to R1 500 per annum. SEIFSA bursaries for study at South African universities continue to be awarded for prescribed courses to all race groups.

The bursary scheme, which had previously been extended to provide for bursaries for Blacks following degree courses containing mathematics and science at Black universities which do not cater for degree courses in the engineering disciplines, has been further extended to make bursaries available for study in the second year of the two year preliminary engineering courses at the University of the North, the University of Zululand and the University of Fort Hare. The value of the bursary will be the same as that awarded for undergraduate study at other South African universities, namely R1 500 per annum.

The bursary scheme has further been extended to embrace post-graduate study or research at South African universities in technical or scientific fields which relate to the metal and engineering industries or studies leading to MBA, MBL or equivalent qualifications. The bursary in this instance is also R1 500 per annum.

Total value of bursaries awarded since the introduction of the SEIFSA Technological Fund is R1 997 487.

LIAISON WITH SEIFSA UNIVERSITY BURSARS:

A scheme was introduced during the year to establish closer liaison between SEIFSA and its university bursars and to introduce them to the industrial environment.

ADVISORY COMMITTEES:

SEIFSA is represented on advisory committees at the various technikons.

REPRESENTATION ON THE COUNCILS OF TECHNIKONS, TECHNICAL COLLEGES AND TECHNICAL HIGH SCHOOLS:

SEIFSA is also represented on the councils of technikons, technical colleges, technical institutes and technical high schools.

TRAINING OF APPRENTICES — NATIONAL APPRENTICESHIP BOARD:

SEIFSA continues to be represented on the Board, which deals with matters of national policy relating to apprentices.

NATIONAL APPRENTICESHIP COMMITTEE FOR THE METAL INDUSTRY:

SEIFSA is represented on the Committee and its area sub-committees.

APPRENTICESHIP STATISTICS:

Statistics relating to new apprenticeship registrations and current contracts for the years 1977, 1978 and 1979 relating to the National Apprenticeship Committee for the Metal Industry are as follows:—

Year	New Registrations	Current Contracts
1977	3 638	10 412
1978	2 930	9 754
1979	3 352	9 394

In order to assist SEIFSA with the effective planning of its manpower programme and to monitor progress in this regard, monthly statistics are now made available to the metal and engineering industries on the number of contracts registered and current on a designated trade and regional basis.

LIAISON WITH THE CENTRAL ORGANISATION FOR TRADE TESTING (COTT):

Liaison continues with the Central Organisation for Trade Testing through the Liaison Committee of the National Apprenticeship Committee for the Metal Industry, on which SEIFSA is represented.

APPRENTICESHIP TRAINING SCHEDULES:

The Apprenticeship sub-Committee of the SEIFSA Technical Training Committee is reviewing the practical schedules of apprenticeship training, as prescribed under the Apprenticeship Act, to ensure that they meet the needs of the metal and engineering industries. At the same time consideration is being given to the standardisation of training schedules in those instances where the same trades are designated for more than one industry.

SHORTAGE OF APPRENTICES:

SEIFSA has adopted a plan for apprentice recruitment, training and related matters after an in-depth study by the SEIFSA Technical Training Committee, which is responsible for implementing the plan. In order to overcome the shortage of apprentices SEIFSA is to frame targets.

ALLOWANCES FOR EDUCATIONAL QUALIFICATIONS — APPRENTICES:

The SEIFSA Technical Training Committee is reviewing the classification of educational qualifications in respect of which allowances are payable to apprentices and also the amounts of such allowances, particularly in view of the recommendations of the Goode Committee respecting technical qualifications.

RE-STRUCTURING OF ENGINEERING TECHNICIAN COURSES:

In pursuance of the Goode Committee recommendations the technikons have established liaison committees to assist with the re-structuring of the engineering technician courses. SEIFSA is involved in the work of these committees. The Association of Technikons is to liaise with SEIFSA before submitting final recommendations to the Department of National Education on the revised courses flowing from the deliberations of the liaison committees. SEIFSA supports a greater measure of standardisation in the practical training to be received by trainee technicians.

TECHNICIAN BURSARIES — NEW DIPLOMA COURSES:

In view of the re-structuring of courses as a result of the Goode Committee recommendations, SEIFSA is to give preference to the award of bursaries for technician training up to T3 level as the first terminal qualification. Bursaries for study at the T4, T5 and T6 levels will not be excluded, but will be considered on merit and in the light of the needs of the metal and engineering industries.

SHORTAGES OF MANPOWER — SANDWICH COURSES AT TECHNIKONS:

SEIFSA responded to an approach from the National Manpower Commission regarding the need to introduce sandwich courses at technikons for workers from all population groups to overcome the manpower shortages, particularly in the professional, administrative and management fields.

SEIFSA supported the necessity for the rationalisation of courses offered to ensure maximum utilisation of facilities and the extension of such facilities to all racial groups.

SHORTAGE OF DRAUGHTSMEN:

SEIFSA convened a Conference in February, 1980, which was well attended by representatives from the various sectors of the economy concerned with the training and employment of draughtsmen, to examine and consider the acute shortage of draughtsmen in the Republic.

Developments that have since taken place include the planned introduction of pilot courses of six months' duration as from the beginning of 1981. The courses, one in Pretoria and one in Johannesburg, are structured to provide candidates, who will be company based, with intensive training in all facets of draughting. Specialised training will thereafter be received in the work situation.

SHORTAGE OF TECHNICIANS:

The shortage of technicians was also considered at the Conference held in February, 1980. The outcome of the pilot training courses for draughtsmen is being awaited before considering a plan of action on the training of technicians.

The SEIFSA Technical Training Committee has appointed a Technician Training sub-Committee to deal specifically with technician training.

METAL AND ENGINEERING INDUSTRIES EDUCATION AND TRAINING CO-ORDINATING BOARD:

At the special General Meeting of the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry held in May, 1980 to negotiate a new Main Industrial Agreement for the industries, SEIFSA initiated a resolution to establish the Metal and Engineering Industries Education and Training Co-ordinating Board to plan, co-ordinate and advise on skills requirements of the metal and engineering industries, set targets for recruitment and training, introduce new and update existing schemes providing means of training and re-training employees for the industries and to undertake such other activities as may be necessary to secure the future labour needs of the industries.

This Board, which comprises equal employer and trade union participation, held its first meeting in September, 1980.

IN-SERVICE TRAINING ACT, 1979:

SEIFSA is represented on the Council for In-Service Training established under the above Act, which came into operation on 1st October, 1979. This Act provides for the promotion and regulation of the training of certain classes of employees in industry, excluding the training of Black employees which is currently catered for under the Black Employees' In-Service Training Act, 1976.

Member firms have been encouraged to apply for registration of their in-company training schemes and approval of their training facilities under this Act and also under the Black Employees' In-Service Training Act and to route their applications through the Office in order that assistance can be offered where necessary with the object of:

— reducing the time required and the paper work involved in obtaining registration of schemes and courses in terms of these Acts;

— enabling the SEIFSA Office to keep in touch with developments within the metal and engineering industries, so far as in-service training is concerned.

SEIFSA APPRENTICE ACHIEVEMENT AWARDS:

Achievement awards of R100 each and miniature trophies were awarded to those apprentices employed in the metal and engineering industries who obtained the highest marks in trade theory and two other subjects in the National Technical Certificate examinations at N1, N2 and N3 levels in each bloc during the year.

TRAINING OF ARTISANS ACT 1951 — TRAINING SCHEMES

The extension of the establishment of training schemes for artisans under the above Act is continuing with schemes being introduced to cater for Coloured training in the Western Cape and the training of Whites in the Vaal Triangle. Asian artisans are currently being trained at the M.L. Sultan Technikon in Durban and Whites at the Trade Training Centre for Adults, Westlake, near Cape Town.

INSTITUTIONALISED TRAINING — APPRENTICES:

SEIFSA has endorsed in principle institutionalised training of apprentices. Negotiations with the Department of National Education have progressed to the stage where the Department is prepared to make part of the Boksburg Technical College available to the metal and engineering industries for a pilot scheme for the training of fitters and turners, boilermakers/welders, electronics mechanicians and instrument mechanicians, or such other trades as may be selected.

The pilot scheme is expected to commence in May, 1981.

Training is to be offered to 12 to 15 trainees per course per trade and the Department will provide instructors and training material.

The industry is to finance the establishment costs and supply the necessary machinery and equipment for the courses.

A Steering Committee, consisting of equal employer and trade union participation, has been appointed to liaise with the Department in inaugurating the scheme.

RECRUITMENT FOR THE INDUSTRIES:

Over 6 000 enquiries for information regarding employment and careers in the metal and engineering industries were received during the course of the year. The majority of enquiries concerned apprenticeship and technician courses.

Career talks continue to be given to pupils, parents and teachers and other interested persons at various high schools and technical high schools to acquaint them with opportunities in the metal and engineering industries. SEIFSA is also actively participating in vocational guidance exhibitions with a view to stimulating interest in careers within the industries.

The SEIFSA recruitment film "Shaping the Future" was screened by various organisations and also for those to whom talks were given by the Office. Audio-visual aids have been improved and some 4 500 copies of the SEIFSA publication "Careers Guide the Metal and Engineering Industries" have been distributed, mostly to senior pupils at schools. Extracts of the more important features of the booklet have been distributed on a wider basis to pupils seeking vocational guidance.

Discussions with representatives of the psychological and vocational guidance services of the Transvaal Education Department proved most effective in promoting improved vocational guidance

services and also in promoting a greater measure of standardisation as far as these services are concerned.

Visits were also arranged for pupils to member firms to familiarise them with actual working conditions within the industries.

METAL AND ENGINEERING INDUSTRIES EDUCATION AND TRAINING FUND:

Extension of Grant Provisions

The provision of grants for approved training has been extended to employers of artisans trained under the Metal Industries Artisan Training Agreement. The amount of the grant is pro-rata to the grant payable in respect of "Employees who qualify as journeymen under Journeyman Recognition Contracts", namely R3 300, in the ratio that the period of recognised training under the Artisan Training Agreement bears to 5 years.

Increase in Levy

The levy payable by employers to the Fund was increased from R7,80 per month to R11,70 per month with effect from 2nd June, 1980 in respect of each employee (other than an apprentice) employed on work specified at Rate A in the Main Agreement for the industries, or employed by an employer in the industries on designated trades as specified.

Consideration is currently being given to replacing the existing levy/grant system by a multi-tier system providing for increased grants and levies on a graduated scale to establish differentiation between companies relative to their commitment to training.

Increase in Grants

Resulting from the increase in levy, the following increases in grants were introduced with effect from the grant year which commenced on 21st September, 1979:

	Previous Grant	Increase	Increased Grant Award
Apprentices qualifying as journeymen by passing the trade test	R3 200	R1 600	R4 800
Apprentices qualifying as journeymen by effluxion of time	R2 400	R1 200	R3 600
Employees qualifying as journeymen under Journeyman Recognition Contracts	R2 200	R1 100	R3 300

Grants totalling R8 633 481 were paid by the Fund in respect of employees obtaining approved qualifications during the grant year 1978/1979. The total grants paid by the Fund since its inception amount to R43 702 864.

METAL AND ENGINEERING INDUSTRIES EDUCATION AND TRAINING FUND — SUPPLEMENTARY SCHEME:

Arising from provisions made in the Main Industrial Agreement for the Iron, Steel, Engineering and Metallurgical Industries for the establishment of a joint training and retraining scheme, an industrial agreement came into operation on 2nd October, 1978 providing for the payment of levies by employers to finance such scheme, known as the Metal and Engineering Industries Education and Training Fund Supplementary Scheme.

The Supplementary Scheme is separately funded and accounted for as part of the Metal and Engineering Industries Education and Training Fund. The levy payable by employers is 30 cents per employee per month (excluding apprentices and those employees for whom levies are currently payable to the Metal and Engineering Industries Education and Training Fund).

Grants under the Supplementary Scheme for training are payable to those employers who have trained employees under training schemes registered with and approved by the Metal and Engineering Industries Education and Training Fund Supplementary Scheme Management Committee under the conditions prescribed.

Instructor Training Course

To ensure effective training it was essential to create a pool of adequately qualified instructors. For this purpose an instructor training course consisting of two parts was developed and 80 candidates have thus far completed both parts of the course.

Training Handbook — Section 35 of the Main Agreement

A training handbook setting out, inter alia, the objects of the Supplementary Scheme, the procedures to be observed to qualify for grants under the Scheme, the requirements for the approval and registration of training courses and guidelines for training has been compiled. The training procedures set out in the handbook have been approved by the Department of Manpower Utilisation as satisfying the requirements under the In-Service Training Act, 1979 and the Black Employees' In-Service Training Act, 1976.

Training Library

A library of training material is being set up from which members can draw information for training purposes. The library will contain courses developed by the staff of the Supplementary Scheme and also a complete set of courses published by the Engineering Industry Training Board of Great Britain.

Approved Courses

Some 400 courses of training submitted by 21 firms have thus far been approved by the Supplementary Scheme Management Committee.

Payment of Grants

Grant payments totalling approximately R640 000 are in the course of payment to employers for approved training during the first year of operation of the Scheme.

ECONOMICS DIVISION

ECONOMIC ADVISORY COUNCIL:

SEIFSA is represented on the Prime Minister's Economic Advisory Council. The Director of SEIFSA, in an individual capacity, also attends meetings of the Council.

The Council is of the opinion that current economic policy should continue to focus on the promotion of growth and employment and that the prevailing high rate of inflation should not be considered as a deterrent to this policy. It is also of the opinion that the South African economy, which gathered some meaningful momentum during the second half of 1979, should continue to grow at a satisfactory rate during 1980.

Among the matters studied by the Council were economic conditions and prospects in the shorter and long term; the shortages of skilled and semi-skilled labour; the unemployment problem; causes of and possible remedies for the current inflation pressures; training; productivity; and the developing of a national economic strategy.

In regard to the development of a "total economic strategy for the RSA", SEIFSA submitted its prima facie reactions to the Guide Lines prepared by the Office of the Prime Minister: Economic Planning Branch.

The Council is also of the view that exports, despite the worsening in economic conditions of South Africa's major trading partners, will continue to play an important role in stimulating general economic growth. It also comments that the 1979 export-led economic recovery is expected to gradually make way for a consumption-led recovery during 1980.

Further representations to the Council were made by SEIFSA on the inhibiting effects of ratio provisions, related to Section 3 of the Environment Planning Act, 1976, and their adverse impact on the employment of Black workers. SEIFSA also urged that the removal of these provisions would help to cushion the socio-economic effects flowing from the current high Black unemployment situation in certain of the metropolitan areas. Alternative control measures to replace the existing Section 3 provisions are presently under consideration by the Economic Control Planning Committee appointed by the Minister of Industries, Commerce and Consumer Affairs.

SECTORAL ADVISORY COMMITTEES FOR THE ECONOMIC DEVELOPMENT PROGRAMME:

SEIFSA is represented on the Sectoral Advisory Committees for basic iron and steel products; basic non-ferrous metals; metal products; mechanical and electrical machinery; transport equipment and motor components.

The Committees' viewpoints on annual target growth rates for production over the current economic programming period are included in Volume I of the Economic Development Programme for the Republic of South Africa 1978-1987, which gives an indication of the expected growth rate of the economy over the longer term and not the potential as was the case in the previous programme. Volume I was released in October, 1979 by the Office of the Prime Minister: Economic Planning Branch.

Volume II, which details the sectoral implications over the period programme, was released early in 1980.

ECONOMIC ADVISORY COUNCIL SUB-COMMITTEES:

The sub-Committee on Road Transportation, on which SEIFSA has representation, submitted its final recommendations, as regards the possibility of freer competition between various modes of transport in South Africa, to the Council at its meetings on 19th and 20th November, 1979. The recommendations, inter alia, stressed the necessity for an advisory body in the transport sector to act as a co-ordinating advisory agent in respect of future transport policy.

SEIFSA is also represented on the sub-Committee on Import Substitution and also on a Working Group of that sub-Committee, which is undertaking an evaluation of the progress being made.

This sub-Committee has recommended the publishing of a South African Industrial Product Register and discussions were held with the Department of Statistics, who are to undertake the compilation, as to the nature and scope of the Register and its utilisation by the private sector and government purchasing bodies.

S.A. RAILWAY BUDGET — 1980/1981:

SEIFSA representatives, at the invitation of the Minister of Transport Affairs, met with the Minister and senior officials of the Department of Transport and South African Railways on 10th December, 1979 in connection with the Railways Budget for the 1980/1981 financial year.

SEIFSA representatives outlined current conditions in the metal and engineering industries referring, inter alia, to the skilled labour shortage and in-service training schemes and indicated sectoral growth prospects during 1980.

SEIFSA ECONOMIC AFFAIRS COMMITTEE:

The Committee met regularly throughout the year to discuss matters of economic significance to the metal and engineering industries and to review business conditions in the various sectors. The SEIFSA Office prepares a Business Conditions Report, monthly, for distribution to the SEIFSA membership and news media; and also a monthly Report on South Africa's iron, steel and ferro alloys output and private sector foundry output. The

Office, on behalf of the Committee, also submits a SEIFSA Report to the meetings of the Economic Advisory Council.

The Committee, in terms of the directives and parameters decided by the SEIFSA Board of Management and Council, made representations regarding:

— Proposals for the taxation of fringe benefits attaching to employment, indicating to the Commissioner for Inland Revenue that SEIFSA accepted in principle the rationale and proposals contained in the Notes and Draft Bill to amend the Income Tax Act, 1962 in respect of the value of benefits of employment on the understanding that, inter alia, the amendments will be accompanied by some revision of the rate and incidence of tax with particular reference to a lowering of the high marginal rates of personal tax. SEIFSA also submitted detailed comments on a number of provisions in this Draft Bill.

— The formulating of a healthy competition policy for enhancing and maintaining the free market system in the interests of the community and submitted observations to the Chairman of the Competition Board stressing, inter alia, that the free enterprise system must be allowed to operate to its fullest potential; the Board should leave private enterprise and the free market system to resolve matters and should only intervene as a matter of last resort if there are genuine circumstances which in the public interest do not justify acquisitions, monopolistic or oligopolistic conditions; and also that the Board should indicate that parties in the private sector are free to make acquisitions, carry out, inter alia, amalgamations and mergers without prior reference to the Board unless the probable result of the transaction creates monopolistic or oligopolistic conditions.

  The Competition Board was also asked to investigate a new price structure being used by electrical wholesalers with reference to discriminatory discount arrangements offered in the electrical distribution and contracting areas.

— The establishing of a Transport Advisory Council and the Office attended meetings of private sector organisations concerned with transport matters. Arising therefrom, SEIFSA indicated its support of the principles set out in a private sector memorandum to the Minister of Transport Affairs as regards the proposed formation and functions of this Council.

— Draft legislation in respect of "The Substitution of the Co-operative Societies Act, 1939" and submitted nominations for two SEIFSA representatives on the proposed Standing Advisory Committee on Co-operative and Company Sector matters.

— Amendments to the Road Transportation Act, 1977 so that provision for exemption be included in the legislation to provide for employee transportation in respect of urgent repair and site work which does not allow of forward planning.

Bills which were introduced in the course of the 1980 Parliamentary Session and which had a bearing on the SEIFSA sectoral operations were studied. In particular, representations were made as regards the definition of "foreign going ships" in the Sales Tax Act, 1978 as applied to South Africa's ship repair industry and also in respect of the Sales Tax Amendment Act, 1980 so as to enable ship repair work on foreign fishing vessels to be exempt from the application of sales tax. Comment was also expressed as regards the preference method of sales tax collection by the SEIFSA group of industries.

In response to a third questionnaire, relating to the "broad objectives of monetary policy", received from the Commission of Inquiry into the Monetary System and Monetary Policy in South Africa, SEIFSA confined its comments to those questions which had a particular relevance to practical applications in the metal and engineering industries with particular reference to the necessity for an expansionary monetary policy which will permit of increased bank credit for productive purposes and help meet the needs of domestic manufacturers as regards a capability to offer favourable financing.

Specialist sub-Committees, concerned respectively with accounting practices, The Companies Act, export promotion, statistics, taxation and transportation, continued to function in a consultative capacity to the SEIFSA Economic Affairs Committee. In addition, the SEIFSA Products Advisory Committee provided valuable assistance to the SEIFSA representative on the Capital Goods Committee in the regular discussions held with the Department of Commerce and Consumer Affairs.

BUY SOUTH AFRICAN CAMPAIGN:

SEIFSA continues to be associated with the "Buy South African Campaign" and serves on the Buy South African Committee, which operates under the aegis of the South African Consumer Council. The Office also participated in the Buy South African Conference held on 5th March, 1980 and the Director, SEIFSA, presented a paper on "Manufacturing to Quality and Price — dealing with some basic problems facing the domestic manufacturer".

EXPORT MATTERS:

The Standing Committee on Export Incentives, appointed by the Secretary for Commerce and Consumer Affairs, and on which SEIFSA has representation, considered, inter alia, major problems as perceived by exporters in respect of the additional assistance, available as from 1st Sep-

tember 1980, in the New Export Incentive Package; the eligibility of exports as regards Category 'A', where assistance is available across-the-board at a rate of 50 per cent of the duty protection applying to inputs used by exporters; and Category 'B' assistance which is based on export value-added. Guidelines and claims procedures for export incentives to be claimed under Categories 'A' and 'B' are to be made available by the Department of Industries, Commerce and Consumer Affairs. The Standing Committee is also considering problems and difficulties as set out in the Report of the Technical Committee: Export Incentives as also problems arising from the implementing of the new system.

SEIFSA was represented at the Conference of South Africa's Overseas Trade Representatives held during January, 1980 in Geneva. The Conference stressed the necessity to achieve a real growth in South Africa's exports; afforded a valuable insight into South Africa's global strategy; and evidenced the high calibre of South Africa's overseas trade representatives particularly as regards the piloting of new products and penetration into new market areas.

The Federation was represented at the Export Award Banquet held in November, 1979 and it is placed on record that the Minister of Industries, Commerce and Consumer Affairs announced that Laursen Bros. (Pty) Ltd., suppliers of accessories for cargo containers and a member of the SEIFSA group of industries, was the 1979 Overall Export Award Winner.

PRIVATE SECTOR EXPORT ADVISORY COMMITTEE:

The Committee at regular meetings discussed aspects of national export potential and performance. Particular attention was paid to the revised system of export incentives as announced by the Minister of Industries, Commerce and Consumer Affairs during May, 1980 and applying to all qualifying exports after 1st September, 1980. Representations were made to the Standing Committee on Export Incentives urging that there should be no differentiation in treatment as between the primary and manufacturing sectors as regards the rate of value-added assistance; stressing the need for packaging costs to qualify for special assistance under Category 'C'; and also that favourable consideration be given to the situation of exporters in a tax loss situation.

Other matters discussed included a possible restructuring of ocean freight rates in view of the rising costs of ship transportation, which is undermining the viability of export sectors; exchange rate management practices; the difficulties being experienced by exporters arising from the persistent appreciation of the weighted value of the South African Rand; and air freight matters related to the availability of air space and the need for increasing use of air charters.

The Private Sector Export Advisory Committee has also under consideration the degree of congestion now developing in South Africa's transport infrastructure.

ACCOUNTING PRACTICES BOARD:

The Board on which SEIFSA is represented discusses various exposure drafts on accounting policies and prepares statements of standard accounting practice for issue in South Africa. SEIFSA representatives also serve on an Advisory Panel to give advice on significant questions of interpretation of statements of generally accepted accounting practice.

CONTRACT CONDITIONS:

SEIFSA continued to participate in public and private sector discussions on the terms on which contracts are executed in major industries with a view to securing greater uniformity of practice. In this connection a special sub-Committee of the Economic Affairs Committee is preparing comment on "Conditions of Contract for Mechanical and Electrical Engineering Works" prepared by the S.A. Association of Consulting Engineers and which will then be submitted for the information of interested constituent associations.

CONTRACT PRICE ADJUSTMENT PROVISIONS:

The specialist study panel set up at the directive of the SEIFSA Council to examine contract price adjustment provisions applicable to the SEIFSA Group of Industries submitted a detailed Report to the Economic Affairs Committee advising that:

> *The points of principle for the operation of contract price adjustment formulas as set out in the SEIFSA Formula Principles Booklet (Fifth Edition), issued in September, 1976, continue to be valid and can be supported as being fair and reasonable to both the contractor and purchaser.

The Report was accepted by the Economic Affairs Committee and noted by the SEIFSA Council. The specialist study panel is now busy with draft text for a sixth edition of this booklet.

CENTRAL STANDARDISATION COMMITTEE:

SEIFSA has representation on the above Committee, which is considering ways and means of implementing a policy for standardisation and co-ordination of purchases, particularly in regard to government and semi-government bodies.

CONTINUATION COMMITTEE ON THE IMPLEMENTATION OF THE PROGRAMME OF ACTION AGAINST INFLATION:

SEIFSA serves on the above Committee which submitted views to the Prime Minister's Economic Advisory Council.

CUSTOMS TARIFF APPLICATIONS:

The number of applications gazetted in the course of the year, involving an increase in customs duty and/or withdrawal of rebate facilities, which affected the metal and engineering industries, increased marginally compared with the previous year. Such applications are circulated to the membership of the constituent associations with involvement and announced in the SEIFSA Bulletin.

INDUSTRIAL ADVISORY COMMITTEE:

The Committee is comprised of representatives of the four major national employer organisations in the manufacturing sector and senior officials of the Department of Industries, Commerce and Consumer Affairs. The Minister of Industries is Chairman.

Matters discussed during the year included, inter alia, the development of labour-intensive enterprises; the creation of work opportunities; certain bottlenecks in relation to skilled and semi-skilled labour; aspects of strategic planning; the future of the Western Cape; and the proposed legislation governing competition between co-operative societies and the proprietary sector with particular reference to the co-operative lien, which gives co-operative lenders a monopoly over all existing and future produce as surety for any debt owed by a member to a co-operative to the exclusion of the creditor rights of the private sector.

IRON/STEEL EXPORT ADVISORY COMMITTEE:

The Committee, on which SEIFSA has representation, is responsible for the iron/steel export promotion scheme of financial assistance to exporters of fabricated articles, which contain a basic iron/steel content.

The Committee, having noted that Government approval had been received for an increase in the levy, which is now based on a rate of R3,50 gross per ton of domestic sales of primary steels effective as from June, 1980, were agreed that the rate of assistance as accorded to exporters during 1979 could be maintained throughout 1980.

NATIONAL CONSULTATIVE COMMITTEE ON POST OFFICE AFFAIRS:

The Committee, on which SEIFSA has representation, is the principal link between the private sector and the postal and telecommunication authorities. Meetings are attended by senior Post Office officials and on occasion by the Postmaster General. Items for discussion included certain inadequacies in the mail distribution system; the abolition of printed matter rates; and hours of business at Post Offices and hours of acceptance for bulk post.

PRODUCTIVITY ADVISORY COUNCIL:

SEIFSA is represented on the Council. Contacts, which are valuable, between the SEIFSA Office and the National Productivity Institute have been maintained.

SEIFSA SURVEYS:

Three annual SEIFSA surveys, namely of new capital investment in the metal and engineering industries in 1979 and projections for 1980; the annual report of South African foundry output; and a survey of business conditions during 1979 and outlook for 1980 were undertaken during the year. Results were made available to SEIFSA membership, news media and the Prime Minister's Economic Advisory Council.

Actual wage rates paid to hourly rated employees were surveyed and indexed on a quarterly basis for the SEIFSA Bulletin and the Department of Statistics. Monthly SEIFSA surveys of South Africa's iron, steel and ferro alloys output and the private sector foundry output, and of business conditions in the metal and engineering industries continued to be reported in the SEIFSA Bulletin to relevant Government departments and released to news media.

Regular surveys are also conducted on behalf of a number of constituent associations.

SEIFSA STATISTICS:

The SEIFSA Price and Index Pages are updated monthly and published in the SEIFSA Bulletin. Additional indexes published during the year included a SEIFSA Index for "Unworked Materials: Structural Steel" which reflects a more representative mix for the recovery of increased steel prices in the constructional engineering sector and a "Precious Metals: Silver Price Index". The non-member mailing list for the Price and Index Pages currently comprises 800 organisations and persons.

SOUTHERN AFRICAN ECONOMIC CONVENTION PROGRAMME:

SEIFSA continues to participate in the above programme, the objectives of which are to achieve, by the staging of a series of conventions, a South African Economic Community and then a Southern African Economic Community.

SOUTH AFRICAN RAILWAYS: ANNUAL DISCUSSION BETWEEN REPRESENTATIVES OF COMMERCE, INDUSTRY, AGRICULTURE AND THE S.A.R. MANAGEMENT:

SEIFSA was represented at the 1979 Annual Discussion held on 23rd October, 1979. As on previous occasions the General Manager gave a review of operating results and explained and clarified aspects of railway administration policy in reply to private sector representations.

SOUTH AFRICAN SHIPPING BOARD:

SEIFSA is represented on this Board which operates under the Chairmanship of the Secretary for Commerce and Consumer Affairs.

THE S.A. SHIPPERS' COUNCIL:

The Council, on which SEIFSA has respresentation, acts as a forum for private sector representations with the Government and Government agencies and the various shipping conferences on ocean freight and other relevant shipping matters.

SOUTH AFRICAN COUNCIL OF THE INTERNATIONAL CHAMBER OF COMMERCE:

SEIFSA is an "Organisation Member" of the above Council.

STANDING ADVISORY COMMITTEE ON COMPANY LAW:

The Committee, on which SEIFSA is represented, is concerned with company legislation and in particular with the framing of amendment proposals in connection with the Companies Act.

STANDING ADVISORY COMMITTEE ON STATE COMPETITION:

The Committee, on which SEIFSA is represented, met during the year under the Chairmanship of the Secretary for Industries.

STATE TENDER BOARD:

SEIFSA is represented on the State Tender Board which meets weekly.

STATISTICS ADVISORY COUNCIL:

The Director of SEIFSA serves as a member of the Council in an individual capacity.

TECHNICAL ADVISORY COMMITTEES OF THE DEPARTMENT OF STATISTICS:

SEIFSA is represented on three of the Department's Advisory Committees.

TRADE AND PROFESSIONAL ASSOCIATIONS LIAISON COMMITTEE:

SEIFSA is represented on the Committee which considers taxation and allied matters referred to it by participating national bodies.

TRANSPORT CONSULTATIVE COMMITTEE:

The Committee, on which SEIFSA has representation, functions as the liaison and advisory body of the private sector with the authorities concerned with the development and co-ordination of all systems and modes of transport.

The work of the Committee during the year centred on aspects of the Road Transportation Act, 1977 and the Amendment Act No. 91 of 1980 with particular reference to exempted areas and exempted goods; improvements required in respect of container traffic; and voluntary fuel conservation measures which could be implemented in the private sector.

Quarterly meetings are also held with the representatives of the Department of Transport and Provincial Authorities on various transport matters, with particular reference to the inadequacy of transport statistics.

UNIVERSITIES:

SEIFSA is represented on the Board of the Bureau of Financial Analysis (University of Pretoria) and supports the Bureau with a grant-in-aid. SEIFSA is a major sponsor of the Bureau of Market Research (University of South Africa) in respect of its survey and reports of minimum and supplemented living levels relative to non-White families. Useful contact continues to be maintained between officials of the Bureau of Economic Research (University of Stellenbosch), the Bureau for Economic Policy and Analysis (University of Pretoria) and SEIFSA.

WORKING COMMITTEE ON CONSERVATION OF ELECTRICITY:

SEIFSA is represented on this Committee which operates under the aegis of the Department of Minerals and Energy Affairs.

FUNDS ADMINISTRATION DIVISION

The Federation is responsible for the administration and management of the following Funds which derive from the operation of industrial agreements in the metal and engineering industries group:

METAL INDUSTRIES GROUP LIFE AND PROVIDENT FUND:

The above Fund, which was established in 1957, was converted to a contributory pension fund on 2nd June, 1975 with contributions payable by both employees and employers at the rate of 5% of the pensionable remuneration of employees.

Contributions were increased from 5% to 6%, payable by both employees and employers, with effect from 1st July, 1980.

Contributions to the Fund were previously derived from two Schemes: 'A' and 'B'. Scheme 'A' provided for contributions by employers and Scheme 'B' for contributions by employees.

Resulting from the increase in contributions in July, 1980 the Rules of the Fund were amended to provide for the following improvements in benefits effective from 1st October, 1980:

i. Pensions to be based on 2%, instead of 1⅔%, of the member's average annual pensionable remuneration during the best five consecutive years within the last fifteen years of service from date of conversion (2nd June, 1975) to date of retirement.

ii. The introduction of spouses' pensions on death in service of contributing members.

The Fund provides the following benefits:

— Pensions on attainment of retirement age, with provision for early or late retirement.

— Pensions on retirement due to permanent disability/incapacity.

Pensions are payable for the life of the pensioner with a guaranteed minimum period of five years.

— Death benefits — two years' pensionable remuneration.

— Spouses' pensions on the death of pensioners. The spouse's pension is 60% of the member's pension — subject to the full pension being paid for five years from date of retirement of the member — and is payable for life or until remarriage.

— Spouses' pensions on the death in service of contributing members on or after 1st October, 1980. This pension is 40% of the pension to which the deceased member would have been entitled had he remained a member of the Fund until retirement age 65 at the remuneration being received at date of death, and is payable for life or until remarriage.

The spouse's pension is payable to the widower of a deceased female member provided that such widower was actually dependent on the member at the date of her death. In the case of a deceased female pensioner the widower must have been married to her at the date of her retirement from service and actually dependent on her at the date of her death.

Pensions payable to members who retired on or before 31st December, 1979 were increased by 10% with effect from 1st July, 1980.

Benefits totalling R42 967 972 have been paid since the inception of the Fund.

The Fund has 77 043 members. Total assets at date are R356 591 864.

METAL INDUSTRIES GROUP PENSION FUND:

The above Fund, which came into operation on 7th February, 1966 to provide for pension and death benefits for employees not covered under the Metal Industries Group Life and Provident Fund, was converted to a contributory pension fund on 1st July, 1978 with contributions payable by both employees and employers at the rate of 5% of the pensionable remuneration of employees.

Contributions were increased from 5% to 6%, payable by both employees and employers, with effect from 1st July, 1980.

Prior to 1st July, 1978 the Fund was non-contributory on the part of employees, contributions of 5% of pensionable remuneration being paid by the employer only.

Resulting from the increase in contributions in July, 1980 the Rules of the Fund were amended to provide for the following improvements in benefits effective from 1st October, 1980:—

i. Pensions to be based on 2%, instead of 1⅔%, of the member's average annual pensionable remuneration during the best five consecutive years within the last fifteen years of service from date of conversion (1st July, 1978) to date of retirement.

ii. The introduction of spouses' pensions on death in service of contributing members.

The Fund provides the following benefits:

— Pensions on attainment of retirement age, with provision for early or late retirement.

— Pensions on retirement due to permanent disability/incapacity.

Pensions are payable for the life of the pensioner with a guaranteed minimum period of five years.

— Death benefits — two years' pensionable remuneration.

— Spouses' pensions on the death of pensioners. The spouse's pension is 60% of the member's pension — subject to the full pension being paid for five years from date of retirement of the member — and is payable for life or until remarriage.

— Spouses' pensions on the death in service of contributing members on or after 1st October, 1980. This pension is 40% of the pension to which the deceased member would have been entitled had he remained a member of the Fund until retirement age 65 at the remuneration being received at date of death, and is payable for life or until remarriage.

The spouse's pension is payable to the widower of a deceased female member provided that such widower was actually dependent on the member at the date of her death. In the case of a deceased female pensioner the widower must have been married to her at the date of her retirement from service and actually dependent on her at the date of her death.

Pensions payable to members who retired on or before 31st December, 1979 were increased by 10% with effect from 1st July, 1980.

Benefits totalling R24 770 074 have been paid since the inception of the Fund.

The Fund has some 244 453 members and its assets currently total R249 204 208.

SICK PAY FUND FOR THE IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY:

The above Fund was established in 1955 to provide sick pay for employees in the metal and engineering industries who are members of the trade unions party to the industrial agreement and in the employ of employers who are members of the employer associations within the Federation and party to the agreement.

The Fund was extended on 16th January, 1978 by the introduction of Scheme 'B'.

The original scheme is now Scheme 'A'. Scheme 'B' provides for membership of Black employees as well as employees who are members of the trade unions party to the agreement and in the employ of employers who are members of the employer associations within the Federation and party to the agreement, and who do not participate in Scheme 'A'.

The sick pay benefits provided under Scheme 'A' and Scheme 'B' are similar and both schemes provide funeral benefits.

Both Scheme 'A' and Scheme 'B' provide for employers, with the prior permission of the Management Committee of the Fund, to make payments direct to employees in lieu of sick pay benefits and to claim reimbursement from the Fund.

The benefit provisions of the Fund are being improved as follows:—

i. By the introduction of an additional wage group at the top of the scale providing higher benefits than previously available.

ii. Employees who have been in the employ of the same employer and members of the Fund for a period of not less than twelve consecutive months immediately prior to sickness to qualify for:
   (a) the payment of benefits from the first day of absence;
   (b) the payment of a supplementary benefit of 50% of the specified sick pay benefit for the applicable wage group for absence of up to a maximum of two weeks in each cycle of twelve consecutive months of employment. (For a period of less than twelve consecutive months but not less than six consecutive months of employment, as above, this supplementary benefit is payable on a pro rata basis).

Scheme 'A' of the Fund has a membership of 63 040 and Scheme 'B' a membership of 195 767.

Since its inception in 1955 the Fund has paid benefits totalling R17 632 251 of which R16 264 541 has been paid by Scheme 'A' and R1 367 710 by Scheme 'B'.

The assets of the Fund currently stand at R12 226 714 (Scheme 'A' R8 984 600 and Scheme 'B' R3 242 114).

METAL INDUSTRIES MEDICAL AID FUND:

This Fund was introduced on 30th August, 1965 to provide medical aid benefits in respect of employees in the metal and engineering industries who are members of the trade unions party to the industrial agreement and in the employ of employers who are members of the employer associations within the Federation and party to the agreement.

During 1980 the following changes were effected:—

i. Contributions payable by both employees and employers increased as follows:—
   (a) from R3,00 to R4,50 per week in respect of each employee whose actual wage, excluding shift allowances and payment for overtime, is R75,00 per week and over,
   (b) from R3,00 to R3,50 per week in respect of each employee whose actual wage, excluding shift allowances and payment for overtime, is less than R75,00 per week.

ii. Benefits for eye testing and spectacles were extended to dependants of members and the benefit cycle reduced from five years to three years, with the maximum benefit remaining at R60 in aggregate for the member and his dependants in each benefit cycle.

iii. Representation of the employers' organisations and trade unions on the Board of Management of the Fund increased from six a-side to ten a-side.

Benefits are payable by the Fund in respect of the employees and their dependants. Benefits totalling R86 304 333 have been paid since the inception of the Fund.

The number of employees covered by this Fund totals 50 074 and the total assets of the Fund at date are R4 385 746.

ENGINEERING AND ALLIED INDUSTRIES EMPLOYEES' MEDICAL AID FUND:

The above Fund was established on the 17th February, 1975 to provide medical aid benefits for employees who are not covered by the Metal Industries Medical Aid Fund and who are members of the trade unions party to the industrial agreement and in the employ of employers who are members of the employer associations within the Federation and party to the industrial agreement.

During 1980 contributions payable by both employees and employers were increased from 40 cents per week to 50 cents per week.

At present, benefits are only available for members, and not for their dependants.

Benefits totalling R301 768 have been paid since the incention of the Fund.

The number of employees covered by this Fund totals 2970 and the total assets of the Fund at date amount to R36 421.

List of Associations, Office Bearers and Executive Committees

ALUMINIUM DIE CASTING ASSOCIATION OF SOUTH AFRICA:

Chairman: C. J. Beyleveld
Vice-Chairman: S. W. Edmunds
Executive Committee: K. W. Daams S. Reid.

ASSOCIATION OF ELECTRIC CABLE MANUFACTURERS OF SOUTH AFRICA:

Chairman: K. M. Reuss
Vice-Chairman: H. Dixon.

AUTOMOTIVE PARTS PRODUCTION ENGINEERS' ASSOCIATION:

Chairman: C. J. Beyleveld
Vice-Chairman: V. F. Fear
Executive Committee: E. D. Crozier, H. Engelbrecht, A. J. Germishuys, D. Joubert, J. Marnewick.
Co-opted: B. Henschel.
Coastal Representatives: R. A. Cormell, J. James.

BOREHOLE WATER ASSOCIATION:

Chairman: R. H. Gunther
Vice-Chairman: C. Mason
Executive Committee: L. H. Ingle, H. P. Battersby, P. M. Taylor, W. Nockler, R.A. Shearer.

BRIGHT BAR ASSOCIATION:

Chairman: J. B. Annegarn

CAPE ENGINEERS' AND FOUNDERS' ASSOCIATION:

Chairman: R. B. Hughes
Vice-Chairman: J. S. James.

CONSTRUCTIONAL ENGINEERING ASSOCIATION:

Chairman: C. M. Herr
Vice-Chairman: W. B. Illman
Executive Committee: P. Barkhuizen, M. Cvitanich, H. P. Joubert, H. J. Kotze, C. R. Thorp, A. Vowles, A. Wheeler
Co-opted: R. E. Bailey, H. G. Burrows, J. C. de Beer, R. T. Domann, T. J. du Plessis, T. P. Henegan, D. Kirkman, A. M. Leggitt, I. W. Murdoch, M. M. Powell, R. G. Schmetz, J. J. Spies, A. Weinerlein, J. H. Wood.

COVERED CONDUCTOR MANUFACTURERS' ASSOCIATION:

Chairman: Dr. T. L. Woodburn
Vice-Chairman: S. W. Sampson.

DOMESTIC APPLIANCE MANUFACTURERS' ASSOCIATION OF SOUTH AFRICA:

Chairman: J. F. Turner
Vice-Chairman: P. R. Cole
Executive Committee: E. E. Ashdown, M. Klein, D. Metter, W. H. Muirhead, E. R. O'Neill.

Representing Industrial Divisions:

Major Appliance Manufacturers' Division:
Chairman: J. F. Turner
Vice-Chairman: P. R. Cole
Small Appliance Manufacturers' Division:
Chairman: E. R. O'Neill
Vice-Chairman: M. Klein
Room and Auto Air Conditioners Division:
Chairman: D. Metter.

EAST LONDON ENGINEERS AND FOUNDERS EMPLOYERS' ASSOCIATION:

Chairman: N. D. Baxter
Vice-Chairman: M. Spearpoint
Executive Committee: G. E. Brown, D. Braddock, H. Cooper, S. Kruger, S. H. Smith.

EDGE HAND AND SMALL TOOL MANUFACTURERS' ASSOCIATION:

Chairman: S. W. Knobel
Vice-Chairman: A. J. Rademeyer
Executive Committee: R. W. Lawton, V. Mijon, J. P. Viljoen.

ELECTRICAL ENGINEERING AND ALLIED INDUSTRIES ASSOCIATION:

Chairman: F. D. Nash
Vice-Chairmen: J. W. Nelson, K. Worthington
Executive Committee: A. L. Charles, F. Frank, N. Kirchner, H. T. Paynter, R.J.F. Sanne, J. deW. Trotskie, R. Wood
Co-opted: P. Hütz, B. E. Penzhorn, H. Salomons.

Representing Industrial Divisions:

Education and Training Division:
J. deW. Trotskie
Electrical Lighting and Heating Equipment Manufacturing Division:
M. Strous
Electrical Repair Division:
W. R. Temple
Electrical Wiring Accessories Manufacturing Division:
N. Pinker
Erection and Contracting Division:
W. Pierdekaemper
Motor Control Equipment Manufacturing Division:
L. J. Mulligan
Panelboard Manufacturing Division:
M. Feldman
Rotating Machines Manufacturing Division:
K. Worthington
Switchgear Manufacturing Division:
G.A. Ewer
Transformer and Rectifiers Manufacturing Division:
J. W. Nelson.

ELECTRONIC COMPONENT MANUFACTURERS' ASSOCIATION:

Chairman: R. J. Gould
Vice-Chairman: G. Kuijpers
Executive Committee: J. Chodos, L. Warner, P. Wilson
Co-opted: E. R. Geyser.

ELECTRONICS AND TELECOMMUNICATIONS INDUSTRIES ASSOCIATION:

Chairman: J. deW. Trotskie
Vice-Chairman: L. R. Hopwood
Executive Committee: R. H. A. Beurer, Col. W. G. Perkins, J. van der Linde, G. Ross-Gillespie.
Co-opted: H. P. F. van Dyk, H. Redelinghuys, I. W. Penfold, A. van der Merwe, C. C. P. Herbst, B. T. Appleton, B. D. C. Anderson, L. Burnstein.

Representing Industrial Divisions:

Citizen Band Division:
H. Redelinghuys
Land Mobile Radio Communication Equipment Division:
B. T. Appleton.

ENGINEERS' AND FOUNDERS' ASSOCIATION:
(Transvaal, Orange Free State and Northern Cape)
Chairman: R. T. Shaw
Vice-Chairman: I. F. Kerr
Executive Committee: B. Buckley, A. M. Butler, B. Carney, R. J. Crawford-Brunt, P. Krenkel, B. H. Fell, R. M. F. Seawright
Co-opted: L. Kitchener.

FERRO ALLOY PRODUCERS' ASSOCIATION:
Chairman: P. E. Streicher, (Alt.: J. H. Vorster)
Vice-Chairman: J. C. Hall, (Alt.: W. D. Winship)
Executive Committee: C. Carrington (Alt.: H. J. Benn), M. Harris (Alt.: J. L. Carter), E. R. Baggott (Alt.: J. G. Maree), J. M. Meyer (Alt.: F. M. Dunham), Dr. J. L. Muller (Alt.: R. J. Wicks), L. Boyd (Alt.: R. R. Callanan), L. A. Kok, T. J. Callaghan, N. C. Turnbull, A. C. C. Shepherd, J. K. Whiteing, Dr. A. J. Eve, J. S. Stanbury (Alt.: P. J. Delaney), A. L. Melvill (Alt.: R. R. Ellwood), W. H. Magruder (Alt.: D. M. Legg).

FIRE PROTECTION INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: D. Lategan
Vice-Chairman: R. E. Dowse
Executive Committee: J. Bowen, F. J. Fraser, R. Lees.

FORGING ASSOCIATION OF SOUTHERN AFRICA:
Chairman: E. J. Eustice
Vice-Chairman: J. B. Gray.

GAS CLEANING EQUIPMENT SUPPLIERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: J. Ashton
Vice-Chairman: G. D. Craig
Executive Committee: S. R. Been, I. C. Coates (Alt.: I. Holden), R. J. Hirschfeld, D. S. Tuck.

GATE AND FENCE MANUFACTURERS' ASSOCIATION OF THE TRANSVAAL:
Chairman: V. Reece
Vice-Chairman: G. Harrop Allin (Jnr.)
Executive Committee: C. J. Meintjes, S. Rogoff, G. E. Trent.

GAUGE AND TOOL MAKERS ASSOCIATION OF SOUTH AFRICA:
Chairman: F. W. Parrett
Vice-Chairman: T. Smith
Executive Committee: H. U. Binder, F. Cason, H. Jackson, A. L. Skinner
Co-opted: J. J. Jackson.

HEAVY ENGINEERING MANUFACTURERS' ASSOCIATION:
Chairman: A. L. Snell
Vice-Chairman: K. Jackson
Executive Committee: B. Albu, R. F. Anderson, V. C. Botham, A. J. R. Holmes, T. E. Holmes, D. A. Petrie, R. M. F. Seawright.

IRON AND STEEL PRODUCERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: L. Boyd
Vice-Chairman: F. P. Kotzee
Executive Committee: J. C. de Waal, E. H. Dreyer, K. T. Brightman
Co-opted Members: W. G. Boustred, R. Callanan, A. L. Evans, D. A. J. Foord (Alt.: Dr. F. W. Güldenpfennig), D. Hatfield, C. Howatt, E. Jackson, K. D. Kynoch, C. J. M. Prinsloo, H. B. Steyn, G. M. Stott, A. N. Turner, J. H. Vorster, W. van Wyk.

LIFT ENGINEERING ASSOCIATION OF SOUTH AFRICA:
Chairman: B. Cooke
Vice-Chairman: R. P. Hindley
Executive Committee: M. G. Paul, J. L. Ligeti
Co-opted: S. F. White.

LIGHT ENGINEERING INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: J. P. Newman
Vice-Chairman: T. J. Wearne
Executive Committee: H. M. E. Lentz, J. Olsen, T. Ray
Co-opted: E. F. G. Clayton, J. C. McCormick.

Representing Industrial Divisions:
Chain Manufacturing Division:
W. McAlecse
Cycle Manufacturing Division:
S. J. Sherman
Hardware Manufacturing Division:
P. Trompeter
Light Fabricating Division:
A. D. Walker
Light Stampings and Forgings Division:
M. Menachemson
Lock and Latch Manufacturing Division:
J. C. McCormick
Metal Window and Door Manufacturing Division:
R. F. Barwood
Wire Products Division:
P. A. Evans.

MACHINE ENGRAVERS' ASSOCIATION:
Chairman: H. Rothschild
Vice-Chairman: H. Maurer
Executive Committee: R. J. Maizey, M. J. Johnston, K. F. Koll, E. Hubner.

MATERIALS HANDLING ASSOCIATION:
Chairman: M. B. Cramb
Vice-Chairman: L. A. R. Dawe
Executive Committee: D. R. Newton, J. A. Anderson, D. L. Davies, M. G. Kelland, J. Smith, G. J. van Rensburg.
Co-opted: R. Rose.
Ex Officio: P. L. Kearney, A. P. Walter, P. L. Malan.
Honorary Life Member: J. A. Anderson.

Representing Industrial Divisions:
Crane Manufacturing Division:
P. le Roux
Lift Truck and Allied Equipment Division:
M. B. Cramb
Mobile Crane Division:
G. Schneider.

NATAL ENGINEERING INDUSTRIES ASSOCIATION:
Chairman: K. J. Crawford
Vice-Chairman: C. R. Brass
Co-opted: H. Oliver.

Representing Industrial Divisions:
Electrical Engineering Division:
B. St. C. Moor, W. W. Smith.
Foundry Division:
F. V. Rice, D. F. Adkins.
Light Engineering Division:
C. Paterson, A. J. Martin.
Non-Ferrous Division:
H. L. Welsh, K. J. Crawford.
Panelboard Manufacturing Division:
N. Larmont, A. Schriks.
Plastics Division:
E. W. Parrett, J. Ellis
Reinforced Concrete Engineers' Division:
G. Pastorino, M. C. Dixon
Sheet Metal Engineering Division:
H. S. Geisler, G. W. Turner.
Structural, Marine and General Engineering Division:
C. R. Brass, O. D. Harmsworth.

NON-FERROUS METAL INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: A. I. Gruss
Vice-Chairman: L. Davis
Executive Committee: D. Adendorff, J. M. Hess, A. Yoffe
Treasurer: Dr. J. A. Temple
Co-opted: R. Greenberg.

PLASTICS MANUFACTURERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: P. F. S. King
Vice-Chairman: D. A. Jacobs
Executive Committee: D. J. Jacobs, S. K. Kopp, A. H. Hofmeyr, R. W. Maier, T. W. Scarborough.
Co-opted: K. Smith, J. Rubenstein, R. G. Harrison, C. B. Davis, P. S. Kay.

PLUMBERS AND ENGINEERS BRASSWARE MANUFACTURERS' ASSOCIATION:
Chairman: R. W. Monthe
Vice-Chairman: R. M. Burle.

PORT ELIZABETH ENGINEERS' ASSOCIATION:
Chairman: J. H. Fehrsen
Vice-Chairman: C. F. Warden.

PRECISION MANUFACTURING ENGINEERS' ASSOCIATION:
Chairman: R. M. F. Seawright
Vice-Chairman: W. Makepeace
Executive Committee: K. S. Rice, R. J. Hosking, B. H. Fell, C. Saville, L. van Rensburg.

PRESSURE VESSEL MANUFACTURERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: A. H. Goodwin
Vice-Chairman: J. G. de Lange
Executive Committee: P. R. Atkins, A. N. Berman, C. S. Fiander, L. R. Harris, P. Lombardi, S. A. Milford, J. A. Moody.
Co-opted: F. P. Harmsen.

RADIO, APPLIANCE AND TELEVISION ASSOCIATION OF SOUTH AFRICA:
National Chairman: G. Bell
National Vice-Chairman: J. J. Perkins
National Executive Committee:
Representing Transvaal: J. J. Perkins
Representing Natal: H. L. Weindl, R. Ellison.
Representing Cape Province: R. Millson.

SHEET METAL INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: S. Per
Vice-Chairman: J. P. Shnaier
Executive Committee: D. Krost, H. S. Ostroff, L. E. Rose, N. Smith.
Co-opted: B. Blecher, J. Olsen, S. G. Snowden, D. C. O'Brien.

S.A. AGRICULTURAL AND IRRIGATION MACHINERY MANUFACTURERS' ASSOCIATION:
Chairman: R. Mason
Vice-Chairman: L. Lee
Executive Committee: W. J. Beukes, G. L. Laubsher, A. McGugan
Co-opted: T. Kenedi, J. Louw, L. J. van Zyl.

S.A. AIR CONDITIONING EQUIPMENT MANUFACTURERS' ASSOCIATION:
Chairman: J. I. Hancock
Executive Committee: C. H. Bebington, D. J. Ham, V. G. Rees, J. Spence.

S.A. ASSOCIATION OF SHIPBUILDERS AND REPAIRERS:
Chairman: R. B. Hughes
Vice-Chairman: R. J. Jenkins.

S.A. BURGLAR ALARM SYSTEMS ASSOCIATION:
Chairman: R. A. Collatz
Vice-Chairman: S. W. Beard
Executive Committee: A. Primikirios, G. Schultz
Co-opted: P. Swart.

S.A. ELECTROPLATING INDUSTRIES ASSOCIATION:
Chairman: P. L. Schalkwyk
Vice-Chairman: R. Cassel
Executive Committee: C. H. Lauder, K. W. Newdigate, S. A. le Roux
Branch Representatives: B. Wilson — Natal, L. Sebba — Cape, P. Pelser — Port Elizabeth.

S.A. FABRIC REINFORCEMENT ASSOCIATION:
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Vice-Chairman: D. E. G. Mandelzweig
Executive Committee: C. Cassar, D. C. Cheney, M. Hendry-Holland, J. C. Nettleton.

S.A. FASTENERS MANUFACTURERS' ASSOCIATION:
Chairman: C. E. S. Place
Vice-Chairman: H. G. Pearson
Executive Committee: P. Aduc, M. Amm, D. G. Crutchley, J. B. Gray.
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S.A. FLAMEPROOF ASSOCIATION:
Chairman: B. L. Atkins.

S.A. HOT DIP GALVANISERS' ASSOCIATION:
Chairman: W. G. S. Barnett
Vice-Chairman: K. S. Henderson.

S.A. INDUSTRIAL REFRIGERATION AND AIR CONDITIONING CONTRACTORS' ASSOCIATION:
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National Vice-Chairman: D. C. L. Grews
National Executive Committee:
Representing Transvaal:
D. C. L. Grews, J. P. Thornhill.
Representing Natal:
J. A. O. Howard, A. L. Glover.
Representing Western Province:
W. J. Gibson, E. C. J. Verpraet.
Representing Eastern Province:
D. T. C. Ward, G. Thomas
Co-opted: R. D. Baron, A. L. Glover, L. S. King, K. H. Klostermann, R. B. Mitchell, M. Vergunst.

S.A. LIGHTING FITTINGS ASSOCIATION:
Chairman: D. N. Lee
Vice-Chairman: M. W. Edgar
Executive Committee: K. S. B. Evans, J. Downie, J. Rodrigues, T. Gilliland.

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Vice-Chairman: L. Webster
Executive Committee: B. W. Rebstein, P. Reilly, C. G. Roodt.
Co-opted: E. Faccio, L. Leoni, G. Lotter, J. MacOlive, G. Röthel.

S.A. PRODUCTION FOUNDERS' ASSOCIATION:
Chairman: J. T. Davies
Vice-Chairman: A. S. Boynton-Lee
Executive Committee: A. R. Cluett, C. J. du Plessis, A. Ferreira, R. Greenhorn, A. J. Kruger, P. W. Leach, A. C. Mangold, G. H. Stroebel
Co-opted: D. Atkinson.

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Vice-Chairman: M. F. Gow.

S.A. RADIO COMMON CARRIER ASSOCIATION:
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Vice-Chairman: W. E. Mole
Executive Committee: I. D. de Lange, D. Hammick, A. Pugh.

S.A. RADIO AND TELEVISION MANUFACTURERS' ASSOCIATION:
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Vice-Chairman: P. D. Dupen
Executive Committee: P. I. Fouche, R. Suttner, W. Winkler.

S.A. REFRACTORIES PRODUCERS' ASSOCIATION
Chairman: H. R. Reid
Vice-Chairman: N. M. Cullinan
Executive Committee: C. G. B. Sutton, G. Karlson, J. W. G. Tait
Co-opted: B. Jones

S.A. REINFORCED CONCRETE ENGINEERS' ASSOCIATION:
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Vice-Chairman: G. Mandelzweig
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Chairman: A. V. Weinerlein
Vice-Chairman: R. Ludeman
Executive Committee: E. Scott-Dawkins
Co-opted: K. Buhr, W. D. Sendin.

S.A. VALVE MANUFACTURERS' ASSOCIATION:
Chairman: E. W. Jackson
Vice-Chairman: E. A. Atkins
Executive Committee: J. Nash, H. J. H. Stehr.

S.A. WIRE AND WIRE ROPE MANUFACTURERS' ASSOCIATION:
Chairman: B. G. A. Topper
Vice-Chairman: W. J. Beukes.

S.A. WROUGHT NON-FERROUS METAL MANUFACTURERS' ASSOCIATION:
Chairman: S. F. Malan
Vice-Chairman: Dr. J. A. Temple
Executive Committee: G. J. G. Griffiths, W. J. Beukes, R. A. Greenberg.

SOUTHERN AFRICAN WATER AND SEWAGE PLANT SUPPLIERS' ASSOCIATION:
Chairman: R. J. Woosnam-Savage
Vice-Chairman: W. V. Enslin
Executive Committee: K. W. Eickelmann, P. L. Evans, I. R. M. Greig, A. H. Gooch, D. Savitz
Co-opted: J. van den Broeck.

TELEVISION AERIAL INSTALLERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: O. Friend
Vice-Chairman: K. Jones
Executive Committee: E. Durkin, J. A. McWilliam, G. L. Miller-Aiholtz
Co-opted: H. Devine, P. Livesey.

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Chairman: H. Marshall
Vice-Chairman: L. Kacev
Executive Committee: W. Mortimer, R. A. Sienaert, P.F. Burnes.

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Chairman: I. F. Kerr
Vice-Chairman: W. P. Brown
Executive Committee: R. A. Boustred, R. J. Crawford-Brunt, J. I. de Villiers, D. A. J. Foord, R. A. Fox, J. Stanley.

STATISTICS

(Released by SEIFSA Statistical Section)

1. SOUTH AFRICA'S IRON AND STEEL AND FERRO ALLOYS' OUTPUT

(tonnes)

Year	Iron (Liquid and Pig)	Ferro Alloys (1)
1949	695 300	13 200
1954	1 171 000	25 900
1959	1 703 100	104 400
1964	2 656 400	230 300
1965	3 271 200	331 700
1966	3 421 900	336 000
1967	3 420 200	358 300
1968	3 775 100	349 500
1969	3 930 700	424 000
1970	3 929 500	429 200
1971	4 009 700	447 800
1972	4 409 100	490 200
1973	4 329 500	555 800
1974	4 620 500	636 200
1975	5 179 900	747 600
1976	5 795 200	823 100
1977	5 831 200	934 200
1978	5 927 500	1 111 100
1979	7 030 600	1 557 800

(1) Including manganese and silicon metals

Year	Open Hearth, Duplex and Oxygen Blown Steel Ingots	Electric Steel Ingots (2)	Steel Ingots: Total
1949	631 500	—	—
1954	1 264 800	112 000	1 376 800
1959	1 617 300	220 800	1 838 100
1964	2 589 800	412 000	3 001 800
1965	2 651 600	478 000	3 129 600
1966	2 694 800	503 300	3 198 100
1967	3 034 200	568 000	3 602 200
1968	3 308 300	623 600	3 931 900
1969	3 440 800	976 100	4 416 900
1970	3 332 000	1 176 700	4 508 700
1971	3 181 700	1 554	4 735 800
1972	3 317 400	1 842	5 160 000
1973	3 493 700	1 946 900	5 440 600
1974	3 452 700	2 173 100	5 625 800
1975	3 845 000	2 522 300	6 367 300
1976	3 859 700	3 066 400	6 926 100
1977	3 288 100	3 891 400	7 179 500
1978	2 879 400	4 855 600	7 735 000
1979	2 778 100	5 889 400	8 667 500

(2) Including continuously cast steel billets.

2. SOUTH AFRICAN FOUNDRY OUTPUT

(Net output — tonnes)

Year	Steel Castings (1)
1968	89 000
1969	89 100
1970	110 400
1971	121 000
1972	120 900
1973	127 500
1974	135 900
1975	142 400
1976	158 000
1977	139 400
1978	123 800
1979	148 200

(1) Steel Castings: includes carbon steel and manganese and other alloy steel.

(2) Grey and White Iron Castings: includes meehanite and other special iron castings.

(3) Iron Castings Total: excludes ingot moulds produced in steelworks for own use.

Year	Grey and White Iron Castings (2)	Malleable Iron Castings	Ductile (S.G.) Iron Castings	Iron Castings: Total (3)
1968	192 500	25 300	11 500	229 300
1969	201 000	30 300	11 600	242 900
1970	208 200	32 200	12 300	252 700
1971	227 500	38 900	13 000	279 400
1972	211 900	32 300	11 600	255 800
1973	226 600	38 000	13 900	278 500
1974	256 900	41 100	17 500	315 500
1975	293 100	38 200	17 100	348 400
1976	347 400	30 000	13 700	391 100
1977	294 600	27 500	10 400	332 500
1978	292 400	24 300	15 000	331 700
1979	304 600	29 700	24 000	358 300

Year	Copper and Copper Base Alloy Castings	Aluminium and Aluminium Base Alloy Castings	Other Non-Ferrous Metal Castings	Non-Ferrous Metal Castings: Total
1968	7 710	3 860	2 190	13 760
1969	7 990	4 340	2 690	15 020
1970	7 770	4 480	2 680	14 930
1971	7 710	4 390	3 180	15 280
1972	8 160	4 450	3 140	15 750
1973	8 630	3 960	3 030	15 620
1974	9 160	5 530	2 890	17 580
1975	7 840	4 970	2 280	15 090
1976	15 260	5 630	2 660	23 550
1977	13 160	4 610	1 660	19 430
1978	11 330	6 380	1 690	19 400
1979	18 270	9 640	2 570	30 480

3. COMPOSITION OF HOURLY PAID LABCUR FORCE IN THE METAL INDUSTRIES GROUP

	PERCENTAGE DISTRIBUTION												
CLASS	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Artisans	13	14	13	13	13	12	12	12	13	13	13	13	13
Operators, etc.	14	14	13	13	13	13	12	12	14	14	14	13	13
Semi-skilled	23	21	24	24	24	26	29	29	29	36	38	39	39
Labourers	50	51	50	50	50	49	47	47	44	37	35	35	35
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

GROEIRESULTATE

Vervaardiger van landbouskottels en grondslytende on-

4. INDEX OF STATUTORY LABOUR COST IN THE METAL AND ENGINEERING INDUSTRIES — ALL HOURLY PAID EMPLOYEES

Base: July 1952 = 1 000

Month	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
January	1952	1952	2291	2291	2653	2967	3636	4107	4759	4999	5793	6457
February	1952	1952	2291	2291	2653	2967	3636	4107	4770	5003	5793	6498
March	1952	1952	2291	2291	2672	2977	3443	4107	4770	5003	5807	6498
April	1952	1952	2291	2291	2750	2997	3646	4107	4770	5003	5807	6498
May	1952	1952	2291	2300	2750	2997	3646	4107	4770	5017	5807	6498
June	1952	1952	2291	2300	2750	2997	4107	4107	4770	5017	5807	6510
July	1952	1952	2291	2300	2750	2997	4107	4682	4770	5788	6457	7494
August	1952	1966	2291	2300	2750	3409	4107	4699	4770	5788	6457	7494
September	1952	2237	2291	2300	2750	3636	4107	4714	4993	5788	6457	7494
October	1952	2291	2291	2300	2750	3636	4107	4714	4993	5793	6457	
November	1952	2291	2291	2300	2967	3636	4107	4714	4993	5793	6457	
December	1952	2291	2291	2653	2967	3636	4107	4723	4993	5793	6457	
Average	1952	2062	2291	2326	2764	3238	3896	4407	4843	5398	6130	

NOTE — Index of prescribed legal minima of wage rates, contributions to industry funds, etc. in respect of hourly rated employees falling under the Main Industrial Agreement.

5. STEEL PRICE INDEX OF LOCALLY PRODUCED COMMERCIAL STEEL PRODUCTS (ALL TYPES) AS CALCULATED BY ISCOR

Base: July 1952 = 1 000

Month	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
January	1055	1059	1199	1200	1329	1502	2111	2469	3098	3482	3846	4306
February	1055	1059	1199	1200	1329	1502	2111	2469	3098	3482	3846	4306
March	1055	1059	1199	1200	1329	1502	2111	2469	3098	3482	3846	4306
April	1052	1059	1199	1204	1330	1510	2111	2467	3098	3478	3847	4306
May	1052	1059	1199	1204	1495	1510	2111	2837	3098	3478	3847	4306
June	1052	1059	1199	1327	1495	1915	2451	2837	3098	3481	3847	4306 *4904
July	1052	1180	1198	1327	1495	1915	2451	2840	3101	3478	4310	4904
August	1052	1180	1198	1327	1495	1915	2451	2840	3101	3478	4310	4904
September	1052	1199	1198	1327	1495	1915	2451	2840	3101	3815	4310	4904
October	1053	1199	1200	1329	1498	1915	2449	2840	3101	3823	4306	
November	1053	1199	1200	1329	1498	1923	2449	2840	3101	3823	4306	
December	1053	1199	1200	1329	1498	1923	2469	3098	3101	3823	4306	
Average	1053	1126	1199	1275	1441	1746	2311	2737	3100	3594	4077	

* With effect from 20th June 1980

6. INDEX FOR UNWORKED MATERIALS : STRUCTURAL STEEL

Base: June, 1979 = 1 000

Month	1979	1980
January to May		1181
June		1255
July to September		1352
September to December	1181	

7. QUARTERLY INDEX FIGURES OF ACTUAL LABOUR COST

Base: July, 1963 = 100

Month	Hourly paid Employees: Total	Month	Hourly paid Employees: Total
1975: February	246,4	1978: February	353,3
May	254,5	May	359,6
August	280,4	August	403,3
November	281,7	November	407,8
1976: February	287,9	1979: February	408,0
May	290,7	May	408,8
August	322,4	August	449,6
November	332,7	November	459,2
1977: February	337,5	1980: February	460,6
May	337,3	May	460,9
August	337,8	August	527,3
November	352,5		

NOTE — Index of total labour cost based on actual wage rates paid, contributions to industry funds, etc., in respect of hourly rated employees falling under the Main Industrial Agreement.

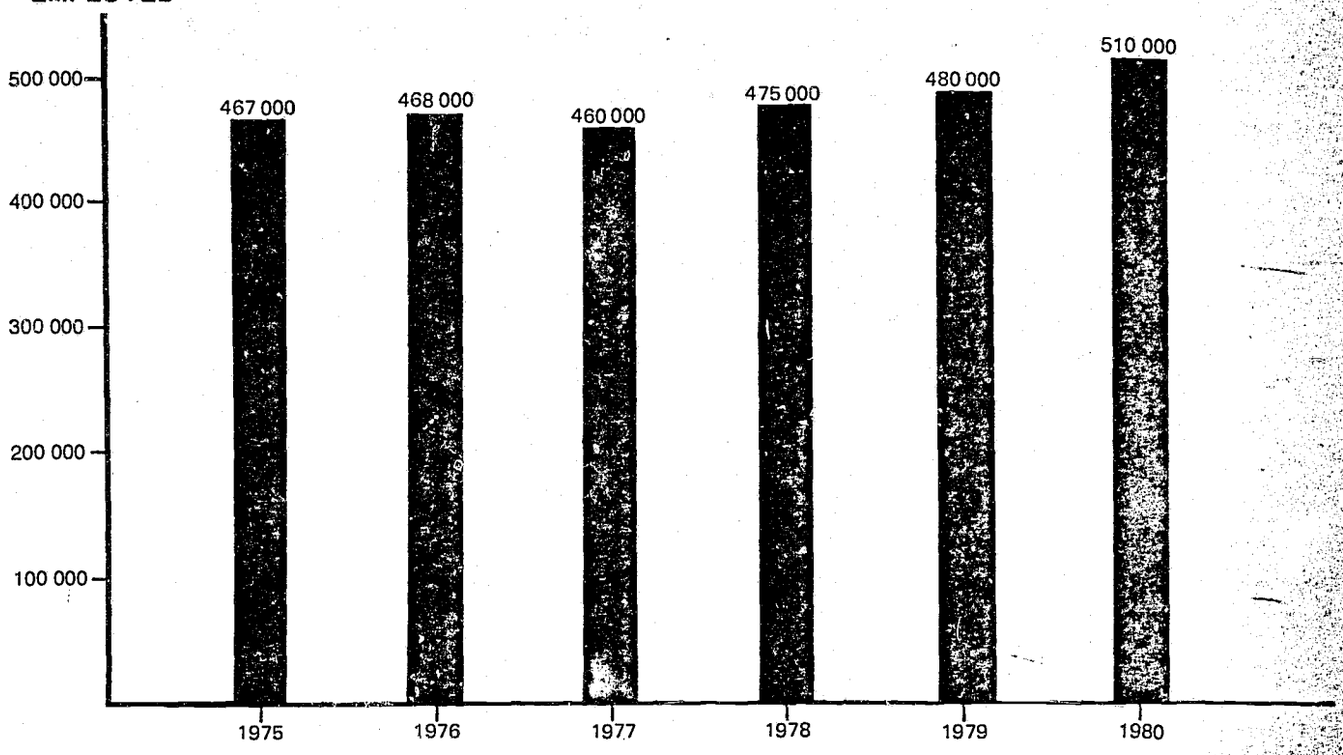
8. QUARTERLY INDEX FIGURES OF ACTUAL HOURLY WAGE RATES PAID

Base: July, 1963 = 100

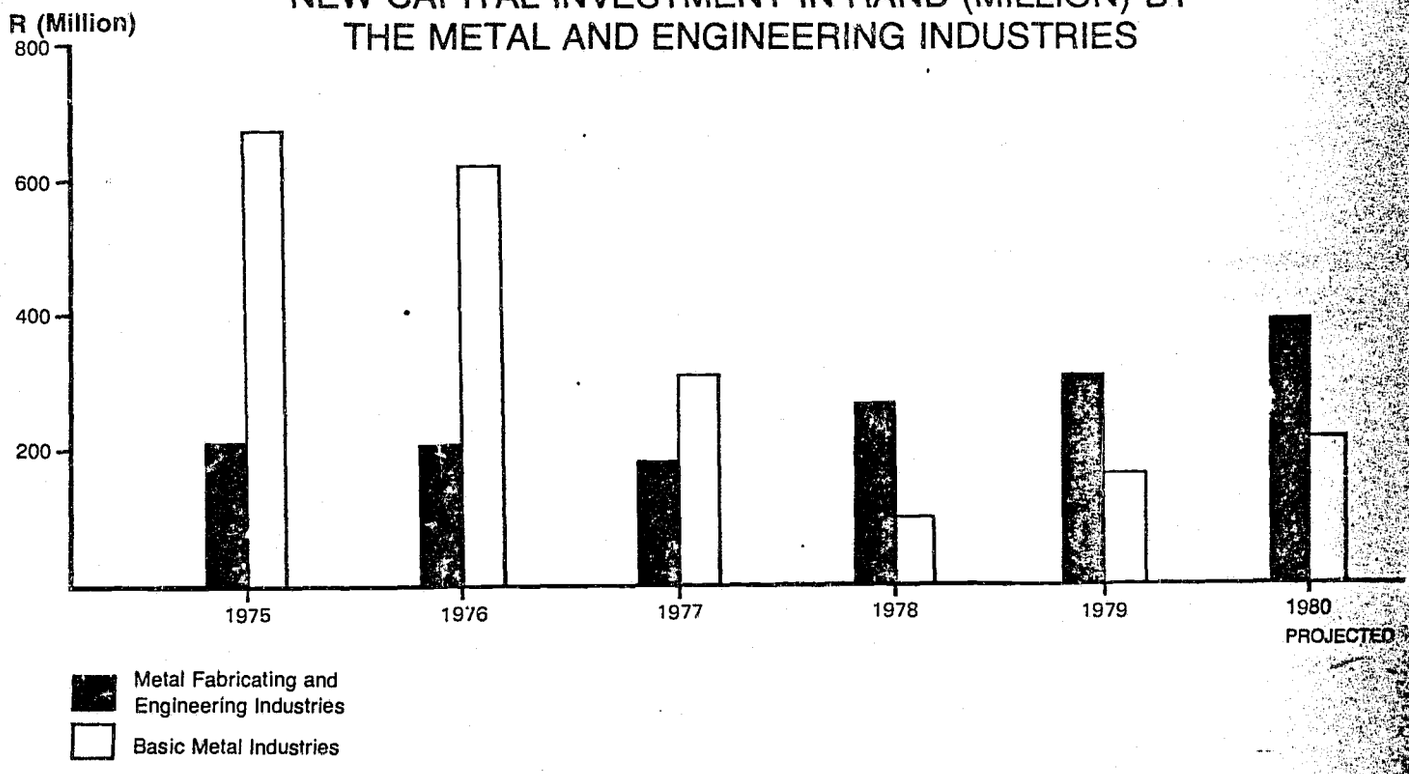
Month	Hourly paid Employees: Total	Month	Hourly paid Employees: Total
1975: February	230,6	1978: February	326,3
May	238,3	May	331,4
August	259,6	August	373,4
November	261,2	November	377,3
1976: February	265,0	1979: February	377,5
May	267,9	May	377,3
August	298,6	August	418,0
November	308,7	November	426,5
1977: February	311,3	1980: February	424,9
May	311,2	May	425,9
August	311,9	August	484,2
November	326,4		

NOTE — Index of actual wage rates paid for ordinary hours of work.

EMPLOYMENT IN PRODUCTIVE PROCESSES IN THE METAL AND ENGINEERING INDUSTRIES



NEW CAPITAL INVESTMENT IN RAND (MILLION) BY THE METAL AND ENGINEERING INDUSTRIES



Steel and Engineering Industries Federation of South Africa

Incorporated Association not for Gain

Head Office:
FIRST FLOOR, METAL INDUSTRIES HOUSE
84, Marshall Street
JOHANNESBURG
2001

P.O. Box 1338
Johannesburg
2000

Telegraphic Address: "VITAL"

Telex: 8-7746 SA

Telephone
833-6033/41

ASSOCIATIONS FALLING WITHIN THE FEDERATION

Aluminium Die Casting Association of South Africa.
Association of Electric Cable Manufacturers of South Africa.
Automotive Parts Production Engineers' Association.
Borehole Water Association.
Bright Bar Association.
Cape Engineers' and Founders' Association.
Constructional Engineering Association.
Covered Conductor Manufacturers' Association.
Domestic Appliance Manufacturers' Association of South Africa.
East London Engineers and Founders Employers' Association.
Edge Hand and Small Tool Manufacturers' Association.
Electrical Engineering and Allied Industries Association.
Electronic Component Manufacturers' Association.
Electronics and Telecommunications Industries Association.
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape).
Ferro Alloy Producers' Association.
Fire Protection Industries Association of South Africa.
Forging Association of Southern Africa.
Gas Cleaning Equipment Suppliers' Association of South Africa.
Gate and Fence Manufacturers' Association of the Transvaal.
Gauge and Toolmakers Association of South Africa.
Heavy Engineering Manufacturers' Association.
Iron and Steel Producers' Association of South Africa.
Lift Engineering Association of South Africa.
Light Engineering Industries Association of South Africa.
Machine Engravers' Association.
Materials Handling Association.
Natal Engineering Industries Association.
Non-Ferrous Metal Industries Association of South Africa.
Plastics Manufacturers' Association of South Africa.
Plumbers and Engineers Brassware Manufacturers' Association.
Port Elizabeth Engineers' Association.
Precision Manufacturing Engineers' Association.
Pressure Vessel Manufacturers' Association of South Africa.
Radio, Appliance and Television Association of South Africa.
Sheet Metal Industries Association of South Africa.
S.A. Agricultural and Irrigation Machinery Manufacturers' Association.
S.A. Air Conditioning Equipment Manufacturers' Association.
S.A. Association of Shipbuilders and Repairers.
S.A. Burglar Alarm Systems Association.
S.A. Electroplating Industries Association.
S.A. Fabric Reinforcement Association.
S.A. Fasteners Manufacturers' Association.
S.A. Flameproof Association.
S.A. Hot Dip Galvanisers' Association.
S.A. Industrial Refrigeration and Air Conditioning Contractors' Association.
S.A. Lighting Fittings Association.
S.A. Machine Tool Manufacturers' Association.
S.A. Production Founders' Association.
S.A. Pump Manufacturers' Association.
S.A. Radio Common Carrier Association.
S.A. Radio and Television Manufacturers' Association.
S.A. Refractories Producers' Association
S.A. Reinforced Concrete Engineers' Association.
S.A. Tube Makers' Association.
S.A. Valve Manufacturers' Association.
S.A. Wire and Wire Rope Manufacturers' Association.
S.A. Wrought Non-Ferrous Metal Manufacturers' Association.
Southern African Water and Sewage Plant Suppliers' Association.
Television Aerial Installers' Association of South Africa.
Television Antenna Manufacturers' Association of South Africa.
Transvaal and O.F.S. Foundry Association.

ADDRESSES OF AREA DIVISIONS AND BRANCH ASSOCIATIONS WITHIN SEIFSA

CAPE:	P.O. Box 1536, Cape Town. 8000.	BORDER:	P.O. Box 27, East London. 5200	O.F.S.:	P.O. Box 420, Bloemfontein. 9300
NATAL:	P.O. Box 4986 Durban. 4000.	MIDLANDS:	P.O. Box 2221, Port Elizabeth. 6056.	TRANSVAAL:	P.O. Box 1338, Johannesburg. 2000.

Groep Finansiële Hoogtepunte

	1974	1973
BEDRYFSOPSOMMING		
Totale verkope	134 010 000	104 203 000
Wins voor belasting	6 248 000	1 342 000
Wins na belasting	5 226 000	868 000
FINANSIËLE OPSOMMING		
Bedryfskapitaal	16 973 000	12 798 000
Vaste bates teen boekwaarde	31 078 000	29 963 000
Ander bates	5 513 000	5 688 000
Langtermynverpligtinge	22 752 000	21 530 000
Aandeelhouersbelang	30 812 000	26 919 000
KERN DATA		
Verkope (groei)	28,6%	35,5%
Kontantvloei	9 294 000	3 923 000
Netto waarde per gewone aandeel	104,49c	91,06c
Verdienste per gewone aandeel	17,86c	2,85c
Bedryfsverhouding	1,8:1	1,8:1

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Totale verkope	134 010 000	104 203 000
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Verdienste per gewone aandeel	17,86c	2,85c
Bedryfsverhouding	1,8:1	1,8:1

slegs 'n geringe wins vir die jaar voorsien het. Die grootste bydraende faktore tot dié gunstige resultate was 'n redelike verhoging van die pryse van beheerde stale wat gedurende die jaar toegestaan is, voldoende grondstowwe om produksie-eenhede in volle produksie te hou, goeie versendings en volgehoue doeltreffende pogings van Usko werknemers.

VOORUITSIGTE

Die ekonomie van die Westerse wêreld gee heelwat rede tot kommer, met tekens van 'n toenemende resessie in die oorgrote meerderheid lande. Die Suid-Afrikaanse ekonomie sal gewis nie hierteen gespaar bly nie, maar ek glo dat die markte vir die Korporasie se hoofprodukte, nl. staal, aluminium en koper, nie noemenswaardig sal afplat gedurende die jaar nie.

'n Verhoging in die pryse van beheerde staalprodukte is reeds vanaf 1 Januarie toegestaan, maar dit sal nie voldoende wees om voortdurende kostestygings te dek nie. Hier noem ek spesifiek die pryse van ingevoerde allooie wat met elke besending die hoogte inskiet.

Ek wil graag waarderend verwys na die realistiese prysbeleid wat die Regering aanvaar het t.o.v. beheerde staalprodukte en ek vertrou dat 'n verdere prysverhoging oorweeg sal word om kostestygings te bekamp. Die Korporasie volg 'n doelbewuste beleid om te konsentreer op die vervaardiging van die meer winsgewende spesiale stale en aandag word deurgaans geskenk aan die verwerking van eie staal in produkte wat hoër rendement op belegging gee. Hierdeur kan die beperkte voorsiening van staalskrot tot die hoogste winsgewendheid benut word.

Finansiering van die aktiwiteite bly een van ons grootste probleme. Die vraag na bedryfskapitaal neem voortdurend toe. Terselfdertyd is die Direksie se leningsmagte tot die maksimum benut om verouderde toerusting te vervang, vervaardingskapasiteit uit te brei en voorsiening te maak vir die vervaardiging van hoëgraadse spesiale stale. Met hierdie doel voor oë het die Direksie R4,4 miljoen bewillig om 'n moderne elektroslak raffineringsaanleg en smeepers te installeer. Die verouderde toestand van Veldmaster se toerusting vir die vervaardiging van landbouskottels en grondslytende onderdele het genoodsaak dat R2 miljoen aan hierdie aanleg spandeer moet word. Die Korporasie was suksesvol om leningskapitaal teen billike rentekoerse te bekom om hierdie beoogde kapitaalprojekte te finansier. Terselfdertyd is R4 miljoen oorgeplaas uit winste na reserwes om die finansiering van die Korporasie se aktiwiteite te vergemaklik.

materiaal. Daarom word besonder aandag geskenk aan die opleiding van sowel blanke as swart werkers. Interne opleidingsgeriewe word geskep om hierdie doel te verwesenlik. Hoër produktiwiteit van werkers is die grootste enkele faktor wat meehelp om stygende loonkoste te bekamp.

Ek bedank my kollegas op die Raad, die Bestuur en Personeel vir hul bydraes gedurende die afgelope jaar.

M. D. MARAIS
Voorsitter

18 Februarie 1975.

Voorsittersrede

RESULTATE

Die Korporasie het 'n gunstige jaar gehad. Die goeie resultate is veral verblydend in die lig dat ons aanvanklik slegs 'n geringe wins vir die jaar voorsien het. Die grootste bydraende faktore tot dié gunstige resultate was 'n redelike verhoging van die pryse van beheerde stale wat gedurende die jaar toegestaan is, voldoende grondstowwe om produksie-eenhede in volle produksie te hou, goeie versendings en volgehoue doeltreffende pogings van Usko werknemers.

VOORUITSIGTE

Die ekonomie van die Westerse wêreld gee heelwat rede tot kommer, met tekens van 'n toenemende resessie in die oorgrote meerderheid lande. Die Suid-Afrikaanse ekonomie sal gewis nie hierteen gespaar bly nie, maar ek glo dat die markte vir die Korporasie se hoofprodukte, nl. staal, aluminium en koper, nie noemenswaardig sal afplat gedurende die jaar nie.

'n Verhoging in die pryse van beheerde staalprodukte is reeds vanaf 1 Januarie toegestaan, maar dit sal nie voldoende wees om voortdurende kostestygings te dek nie. Hier noem ek spesifiek die pryse van ingevoerde allooie wat met elke besending die hoogte inskiet.

Ek wil graag waarderend verwys na die realistiese prysbeleid wat die Regering aanvaar het t.o.v. beheerde staalprodukte en ek vertrou dat 'n verdere prysverhoging oorweeg sal word om kostestygings te bekamp. Die Korporasie volg 'n doelbewuste beleid om te konsentreer op die vervaardiging van die meer winsgewende spesiale stale en aandag word deurgaans geskenk aan die verwerking van eie staal in produkte wat hoër rendement op belegging gee. Hierdeur kan die beperkte voorsiening van staalskrot tot die hoogste winsgewendheid benut word.

Finansiering van die aktiwiteite bly een van ons grootste probleme. Die vraag na bedryfskapitaal neem voortdurend toe. Terselfdertyd is die Direksie se leningsmagte tot die maksimum benut om verouderde toerusting te vervang, vervaardingskapasiteit uit te brei en voorsiening te maak vir die vervaardiging van hoëgraadse spesiale stale. Met hierdie doel voor oë het die Direksie R4,4 miljoen bewillig om 'n moderne elektroslak raffineringsaanleg en smeepers te installeer. Die verouderde toestand van Veldmaster se toerusting vir die vervaardiging van landbouskottels en grondslytende onderdele het genoodsaak dat R2 miljoen aan hierdie aanleg spandeer moet word. Die Korporasie was suksesvol om leningskapitaal teen billike rentekoerse te bekom om hierdie beoogde kapitaalprojekte te finansier. Terselfdertyd is R4 miljoen oorgeplaas uit winste na reserwes om die finansiering van die Korporasie se aktiwiteite te vergemaklik.

BESTUUR EN PERSONEEL

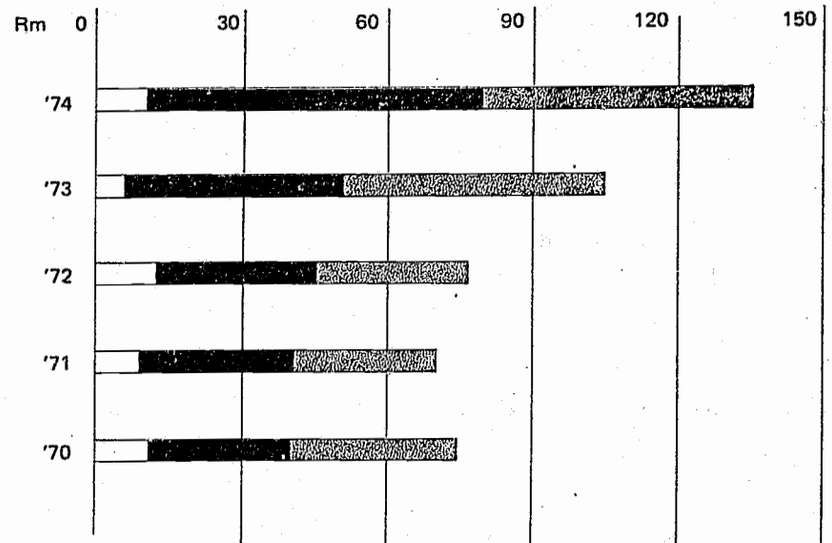
Die Direksie glo dat die groei van die Korporasie ten nouste saamhang met die ontwikkeling van sy menslike materiaal. Daarom word besonder aandag geskenk aan die opleiding van sowel blanke as swart werkers. Interne opleidingsgeriewe word geskep om hierdie doel te verwesenlik. Hoër produktiwiteit van werkers is die grootste enkele faktor wat meehelp om stygende loonkoste te bekamp.

Ek bedank my kollegas op die Raad, die Bestuur en Personeel vir hul bydraes gedurende die afgelope jaar.

M. D. MARAIS
Voorsitter

18 Februarie 1975.

VERKOPE

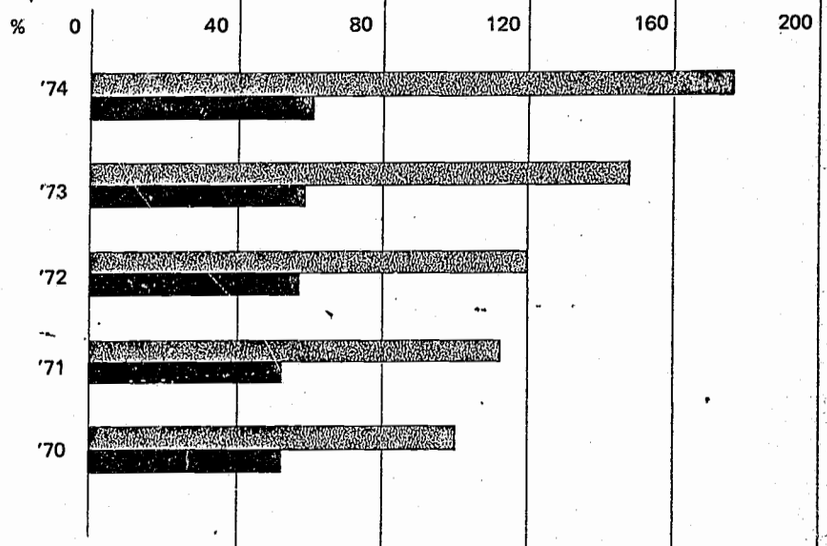


Koper

Staal

Aluminium

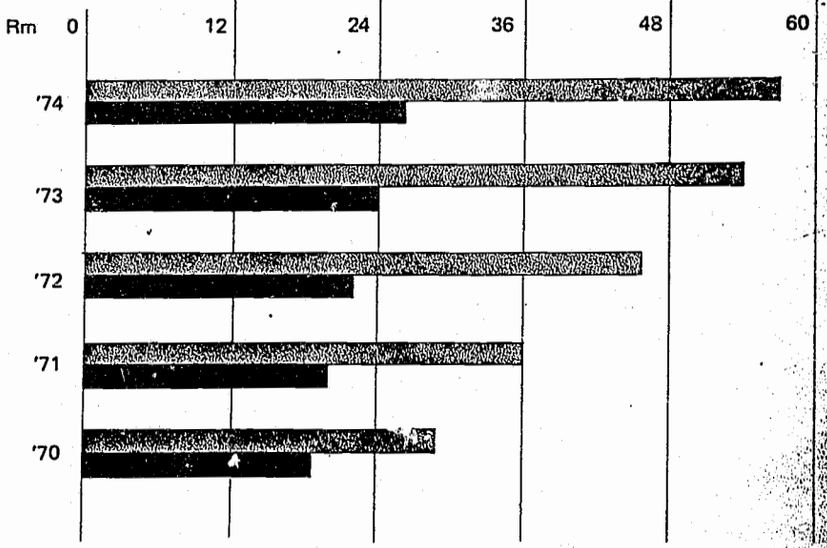
SALARISSE, LONE EN AANTAL WERKNEMERS



Salarisse en lone - 1970 = 100%

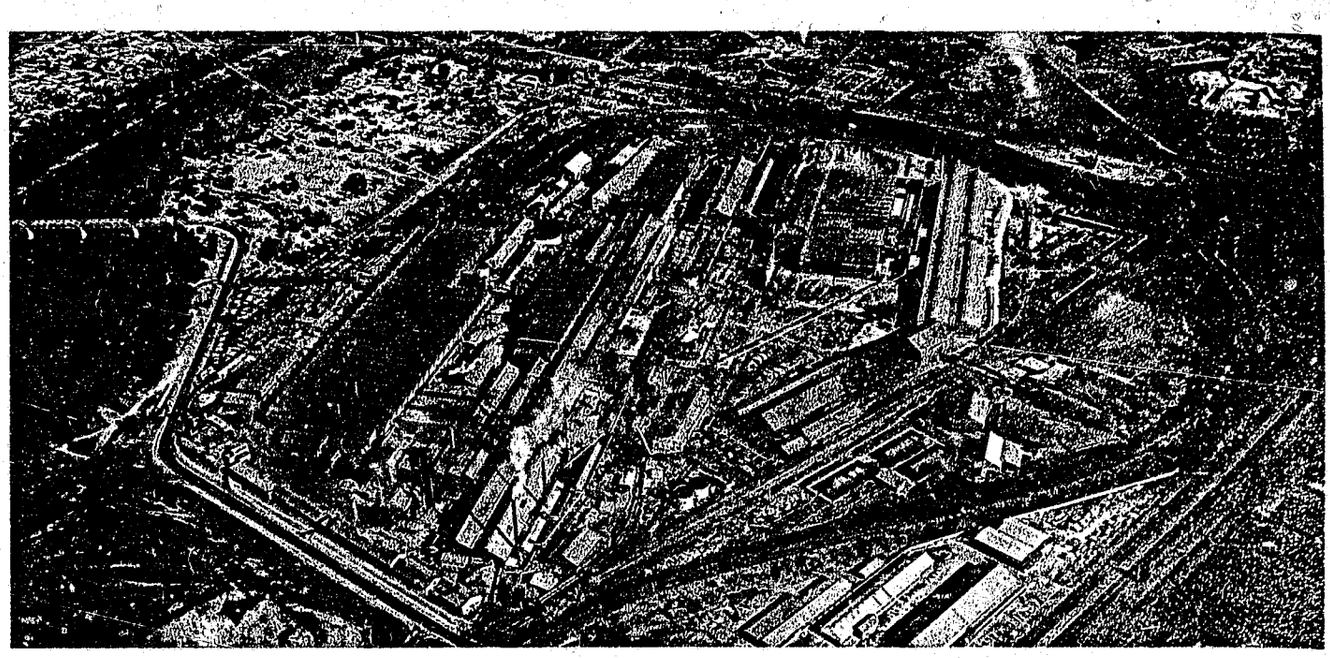
Aantal werknemers

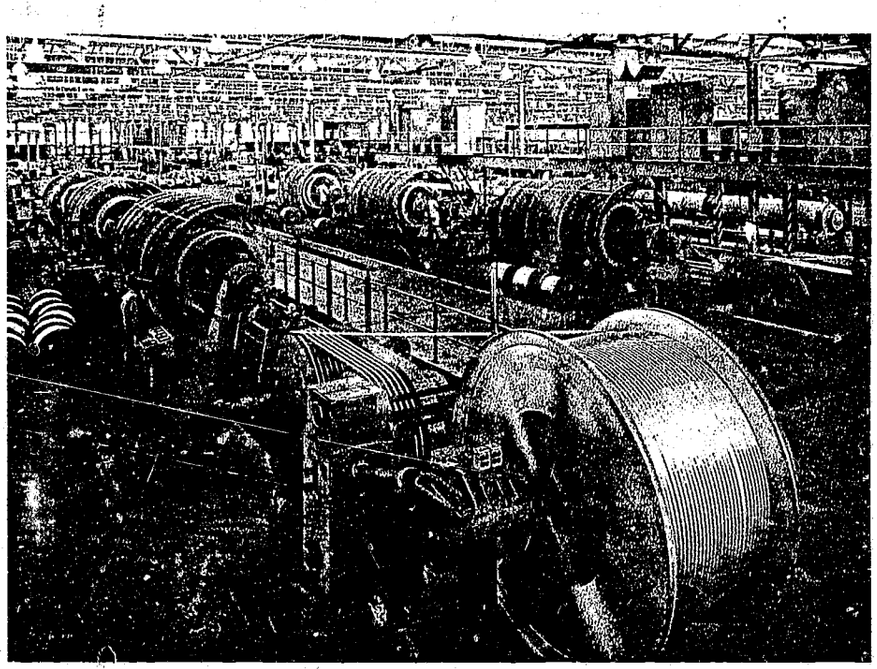
VASTE BATES EN WAARDEVERMINDERING

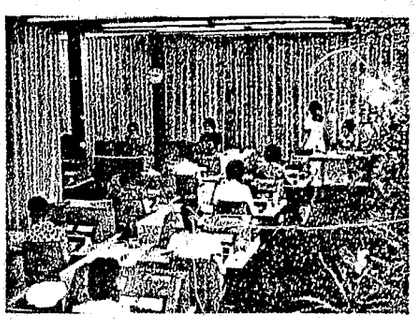


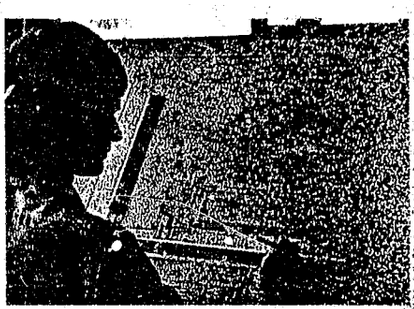
Vaste bates

Waardevermindering









Groep Finansiële Jaarstate

VIR DIE JAAR GEËNDIG 31 DESEMBER 1974

Inhoud	Bladsy
Verslag van die Direkteure	8
Inkomstestaat	12
Balansstaat	13
Aantekeninge tot die Finansiële Jaarstate	14
Staat van Bron en Aanwending van Fondse	19
Groep Vyfjaar Oorsig	20

Die Groep Finansiële Jaarstate wat op bladsye 8 tot 19 uiteengesit is, is deur die Raad van Direkteure goedgekeur en is op 18 Februarie 1975 namens die Raad onderteken deur

M. D. MARAIS,
Voorsitter.

J. P. COETZEE,
Direkteur.

Verslag van die Ouditeure

Aan die Lede van die Unie Staalkorporasie (van Suid-Afrika) Beperk

Ons het die finansiële jaarstate sóos op bladsye 8 tot 19 uiteengesit, nagegaan en, na ons mening, gegrond op ons ondersoek en die verslae van die ouditeure van sekere filiale wat nie deur ons geouditeur word nie, verstrek hierdie state 'n redelike weergawe van die finansiële stand van die korporasie en sy filiale en van die resultate van hul bedrywighede op die wyse wat die Maatskappywet, 1973, vereis.

Deloitte & Kie.,

Geoktrooieerde Rekenmeesters (S.A.)
Johannesburg.
18 Februarie 1975.

Balansstaat	13
Aantekeninge tot die Finansiële Jaarstate	14
Staat van Bron en Aanwending van Fondse	19
Groep Vyfjaar Oorsig	20

deur

M. D. MARAIS,
Voorsitter.

J. P. COETZEE,
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Aan die Lede van die Unie Staalkorporasie (van Suid-Afrika) Beperk

Ons het die finansiële jaarstate sôos op bladsye 8 tot 19 uiteengesit, nagegaan en, na ons mening, gegrond op ons ondersoek en die verslae van die ouditeure van sekere filiale wat nie deur ons geouditeur word nie, verstrek hierdie state 'n redelike weergawe van die finansiële stand van die korporasie en sy filiale en van die resultate van hul bedrywighede op die wyse wat die Maatskappywet, 1973, vereis.

Deloitte & Kie.,

Geoktrooieerde Rekenmeesters (S.A.)
Johannesburg.
18 Februarie 1975.

Verslag van die Direkteure

U direkteure lê hiermee hulle jaarsverslag en die geouditeerde finansiële jaarstate vir die jaar geëindig 31 Desember 1974 voor.

GROEPRESULTATE

Die wins toedeelbaar aan aandeelhouers van Usko het na belasting R5 226 000 bedra, wat R4 358 000 hoër is as die vorige jaar. Omset het verhoog van R104 203 000 tot R134 010 000, terwyl die verdienste per gewone aandeel verhoog het van 2,85 sent tot 17,86 sent.

Bedryfswinste het verhoog van R5 223 000 tot R11 867 000, waartoe die belangrikste bydraers spesiale staal- en aluminiumprodukte was. Rente betaal het weereens skerp toegeneem met R1 520 000 as gevolg van hoë rentekoerse op plaaslike en oorsese lenings.

Die verhouding van wins voor belasting toeskryfbaar aan die verskeie klasse van besigheid was:

	1974	1973
Staalafdeling	4 673 000	338 000
Nie-ysterhoudende afdeling	1 575 000	1 004 000
	R6 248 000	R1 342 000

GROEPSAKTIWITEITE

Staal

Usko vervaardig sagtestaalprofiele, spesiale stale en gietstukke. Versendings van alle staalprodukte vir die jaar het verhoog met 27 000 ton tot 291 000 ton. Die nuwe wals by Vaalwerke is gedurende September 1974 in bedryf gestel en dit word verwag dat dit vroeg in die nuwe jaar vlot sal loop. Die staalprysverhoging wat in Junie toegestaan was het meegehelp om aansienlike verhogings in koste, veral arbeid, allooie en spoorvrag, te absorbeer.

Koper

Hierdie afdeling verkry sy koperstang vanaf Transvaal Copper Rod Company. Die stang word getrek tot draad en strook, terwyl sommige draad verder verwerk word tot gevlegde geleier. Die aanvanklike hoë aanvraag het gedurende die laaste helfte van die jaar afgeplat, 'n neiging wat verwag word om 'n sekere tyd voort te duur. Alhoewel laer as begroting, het koper weereens 'n bevredigende bydrae tot groepswinste gelewer.

Usko Aluminium Korporasie (Edms) Beperk

Die aanleg is gevestig in Richardsbaai en die maatskappy vervaardig onbedekte aluminium oorhoofse geleier vir die transmissie van elektrisiteit. Die maatskappy het 'n geslaagde jaar beleef waarin winste die begroting oortref het, hoofsaaklik as gevolg van beter benutting van aanleg-kapasiteit. 'n Styging in die aanvraag na oorhoofse geleier as gevolg van die energie-krisis verseker verdere groei in die komende jaar.

Veldmaster (Edms) Beperk

Vervaardiger van landbouskottels en grondslytende onderdele. Die grootste gedeelte van die produksie word uitgevoer. Die opeenhoping in Suid-Afrikaanse hawens het daartoe gelei dat uitvoerdoelwitte nie bereik is nie, met meegaande hoë vertragingskoste. Die verhoging van instandhoudingskoste her verder bygedra tot 'n verlies vir die jaar.

Die aanleg word gemoderniseer, wat sal meehelp om winsgewendheid gedurende die komende jaar te verbeter.

Usko Kabelmaatskappy (Edms) Beperk

Onderhandelings is gefinaliseer met Southwire van Amerika, die ander aandeelhouer, waardeur die patent vir die vervaardiging van „Triple E" aluminiumkabel aan hulle teruggegee sal word. Usko Kabelmaatskappy sal daarna 'n volfiliaal van Usko word, wat konvensionele gepantserde kabel volgens S.A.B.S. standaarde sal vervaardig en aanvaarbaar is vir plaaslike nywerhede.

Transvaal Copper Rod Company

Die funksie van hierdie gesamentlike onderneming tussen Usko en Palabora Mining Company is om gesmelte koper, verskaf deur Palabora Mining Company, te verwerk tot stang wat eksklusief deur Usko verkoop word. Die resultate vir die jaar was effens onder begroting as gevolg van 'n afplatting in die aanvraag na koperstang.

National Materials Service Corporation (Edms) Beperk

Hierdie gesamentlike maatskappy van Usko en Klöckner Nederland B.V. dryf handel as 'n staalhandelaar en dienssentrum.

Die maatskappy het nog 'n suksesvolle jaar gehad.

Hall & Pickles (Coastal) (Edms) Beperk

Hierdie maatskappy dryf handel in spesiale staal in Durban en Port Elizabeth en het bevredigende resultate gedurende die jaar gelewer.

Veldmaster (Rhodesia) (Pvt) Limited

Hierdie maatskappy wat landbouskottels in Rhodesië vervaardig, het sy winsgewendheid gehandhaaf.

Alustang (Edms) Beperk

Vervaardiger van aluminiumstang vir produksie van oorhoofse geleier te Richardsbaai. Die maatskappy word gesamentlik besit deur Usko, Aberdare Cables Beperk en Alusaf (Edms) Beperk.

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Geen dividend is verklaar nie omdat inkomste behou is om die oprigting van 'n bykomende smeltoond te finansier

African Aluminium Company (Edms) Beperk

Hierdie maatskappy wat in 1955 deur Usko en Aberdare Cables Beperk gestig is met die doel om aluminiumstang uit ingevoerde aluminiumknuppels te vervaardig, het sy bedrywighede gestaak en 'n finale likwidasie-dividend is gedurende die jaar ontvang.

GEKONSOLIDEERDE BALANSSTAAT

Die totale kapitaal aangewend aan die einde van die finansiële jaar beloop R53 564 000 (1973: R48 449 000), waarvan ongeveer 70 persent in die staalafdeling en 30 persent in die nie-ysterhoudende afdeling aangewend is. Die totale kapitaaluitgawe vir die jaar het R3 825 000 (1973: R8 611 000) beloop en is hoofsaaklik aangewend vir die voltooiing van die staaluitbreidingskema, in besonder die nuwe wals by Vaalwerke. Verder het verpligtinge vir kapitaaluitgawes aan die einde van die jaar R3 296 000 (1973: R2 099 000) bedra, terwyl u direkteure verdere uitgawes ten bedrae van R4 798 000 (1973: R815 000) goedgekeur het. Hierdie bedrae sal hoofsaaklik bestee word om fasiliteite vir die vervaardiging van spesiale stale asook landbouskottels en onderdele te moderniseer. Voorrade teen R24 300 000 toon 'n verhoging van R8 236 000 in vergelyking met 1973. Die verhoging is te wyte aan hoër eenheidskoste en 'n vermeerdering in fisiese voorrade wat hoofsaaklik voortgespruit het uit toenemende produksie-aktiwiteite.

AANDELEKAPITAAL

Die gemagtigde en uitgereikte aandelekapitaal van die Korporasie bly onveranderd op 'n bedrag van R15 005 000, verdeel in 29 010 000 gewone aandele van 50 sent elk, 125 000 voorkeur „A"-aandele van R2 elk en 125 000 voorkeur „B"-aandele van R2 elk, almal volopbetaald.

FINANSIES

Daar is 'n jaarlikse toename in die kontantbehoeftes om die verskillende aktiwiteite van die groep te finansier, vir bedryfskapitaal sowel as die modernisering van produksiefasiliteite. Die kontantbehoeftes vir die komende jaar sal gedeeltelik gedek word uit winste behou en verder deur lenings, waarvoor fasiliteite reeds gereël is. Aandeelhouers sal merk dat goedkeuring by die komende algemene jaarvergadering gevra sal word om die leningsbevoegdhede van die direkteure na R50 000 000 te verhoog.

DIVIDENDE

Dividende gedurende die jaar verklaar het 18 sent per R2 aandeel op die kumulatiewe winsdelende voorkeur „A"- en „B" -aandele bedra.

'n Gewone dividend van 4,5 sent per aandeel is op 18 Februarie 1975 verklaar, betaalbaar aan gewone aandeelhouers wat op 7 Maart 1975 geregistreer is en dividendbewyse sal op of teen 10 April 1975 gepos word.

RAAD VAN DIREKTEURE

Op 17 September 1974 is Mnr. M. W. King as alternatiewe direkteur vir Mnr. E. P. Gush, wat sy benoeming van Mnr. M. W. Dunningham teruggetrek het, aangestel. Besonderhede aangaande direkteure verskyn op bladsy 2 van hierdie verslag.

SEKRETARIS

Mnr. R. J. van Jaarsveld is op 21 Mei 1974 as Sekretaris aangestel in die plek van Mnr. H. J. Oosthuizen wat uit die diens van die Korporasie getree het. Die besigheidsadres van die Sekretaris is Generaal Hertzogweg, Vereeniging en sy posadres is Posbus 48, Vereeniging 1930.

GROEPWINS EN AANWENDINGS

	1974 R'000	1973 R'000
Groepwins vir die jaar na belasting	5 110	785
Plus Buite-aandeelhouersgedeelte van verlies in 'n filiaalmaatskappy	116	83
Wins toedeelbaar aan aandeelhouers van Usko	5 226	868
Plus Inkomste behou aan begin van die jaar	1 028	1 200
Beskikbaar vir aanwending	6 254	2 068
U Direkteure het die totaal as volg toegewys:		
Dividende	1 350	40
Oordrag na reserwe vir vervanging van vaste bates	3 000	1 000
Oordrag na algemene reserwe	1 000	—
	5 350	1 040
Inkomste behou aan einde van die jaar	904	1 028
	6 254	2 068

INLIGTING TEN OPSIGTE VAN FILIAALMAATSKAPPYE

Belang in filiale

			Usko belang teen boekwaarde			
			Aandele		Bedrae verskuldig	
Naam van Filiaal	Uitgereikte Kapitaal	Usko Belang	1974	1973	1974	1973
	R		R	R	R	R
Usko Aluminiumkorporasie (Edms) Beperk	3 000 000	100%	3 000 000	3 000 000	342 922	(1 596 626)
Veldmaster (Edms) Beperk	200 000	100%	303 391	443 435	3 908 637	1 746 065
Usko Kabelmaatskappy (Edms) Beperk	500 000	51%	—	121 000	912 074	805 622
Usko Behuising (Richards-baai) (Edms) Beperk	150 000	100%	128 837	150 000	31 927	12 677
Usko Huiseienaars (Edms) Beperk	4	100%	—	41 954	1 811 701	1 565 641
Usko Aluminium Systems (Edms) Beperk	100	100%	100	100	(100)	(100)
	3 850 104		3 432 328	3 756 489	7 007 161	2 533 279

Usko se belang in filiaalmaatskappye word getoon teen kosprys min voorsiening vir verliese in filiale.
Die uitgereikte aandelekapitaal van die filiale en Usko se belang daarin het gedurende die jaar onveranderd gebly.

Totale bedrag van Usko se belang in winste en verliese na belasting in filiale	1974 R'000	1973 R'000
Totale winste van filiale	957	105
Totale verliese van filiale	675	263

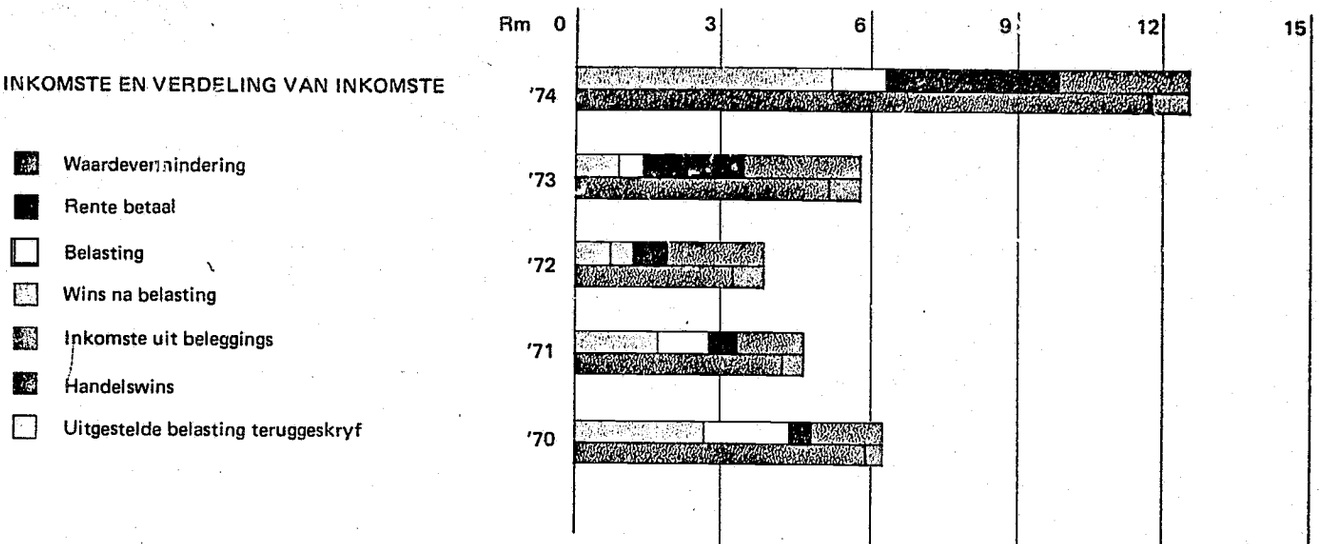
DIREKTEURE SE AANDEELHOUDING

Op 31 Desember 1974 het die direkteure en alternatiewe direkteure van die Korporasie tot eie voordeel 'n totaal van 2 500 (1973 – 2 500) gewone aandele in die Korporasie gehou.
Op dieselfde datum was hulle nie-bevoordeelde belange 12 000 (1973 – 12 000) gewone aandele.

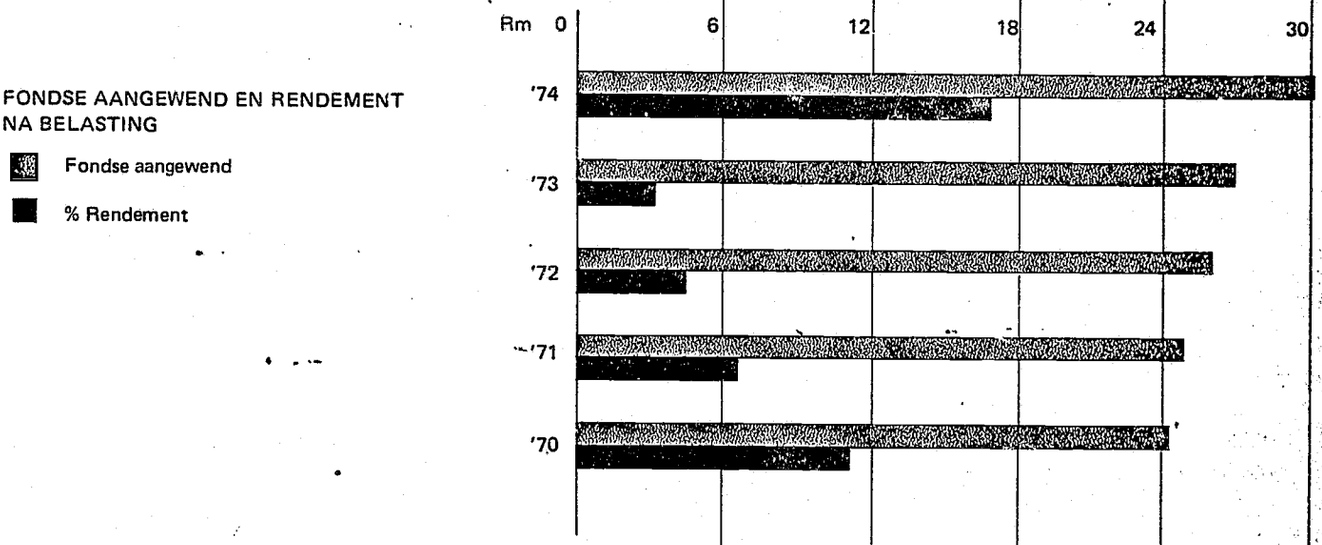
HOUERMAATSKAPPY EN BEHERENDE MAATSKAPPY

Metkor Beleggings Beperk is die Korporasie se houermaatskappy op grond van aandeelhouding en Yskor is die Korporasie se beherende maatskappy op sterkte van die meerderheidstemreg gesetel in die voorkeuraandele.

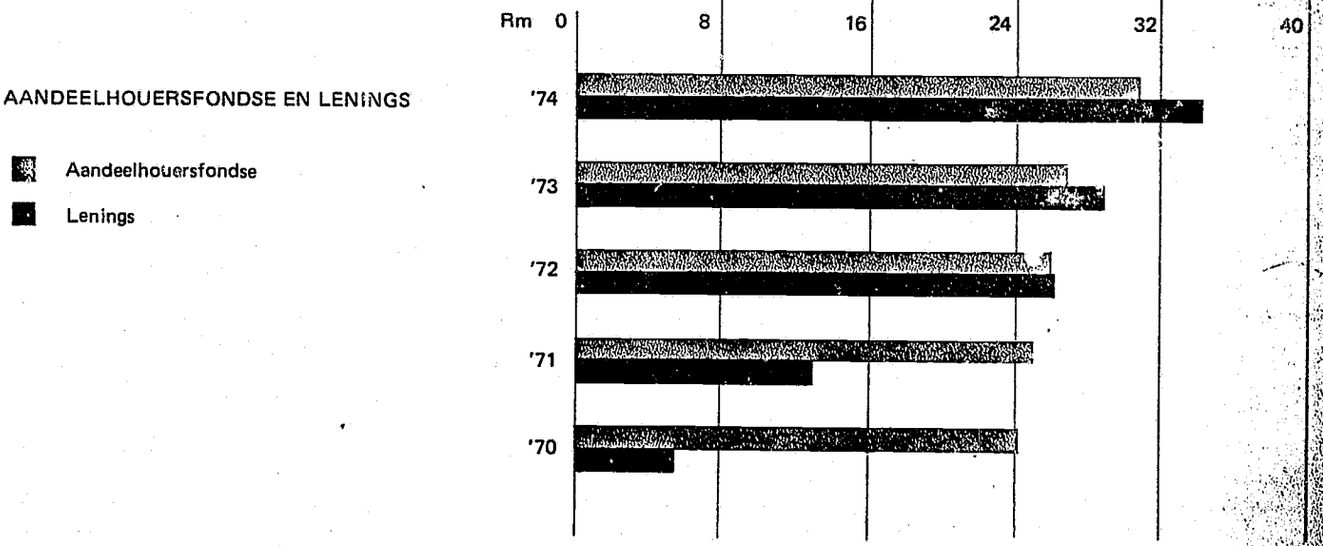
INKOMSTE EN VERDELING VAN INKOMSTE



FONDSE AANGEWEND EN RENDEMENT NA BELASTING



AANDEELHOUERSFONDSE EN LENINGS



Inkomstestaat

VIR DIE JAAR GEËINDIG 31 DESEMBER 1974

	Aante-kening	USKO 1974 R'000	USKO 1973 R'000	GROEP 1974 R'000	GROEP 1973 R'000
OMSET	1	**121 178**	**95 809**	**134 010**	**104 203**
BEDRYFSWINS	14	**10 901**	**4 726**	**11 857**	**5 223**
Inkomste uit beleggings	16	586	549	586	549
Inkomste uit filiaalmaatskappye	17	903	318	—	—
Waardevermindering		2 313	2 065	2 683	2 428
Rente betaal op geleende geld		3 397	1 883	3 522	2 002
WINS VOOR BELASTING		**6 680**	**1 645**	**6 248**	**1 342**
Belasting	18	930	569	1 138	557
WINS NA BELASTING		**5 750**	**1 076**	**5 110**	**785**
Buite-aandeelhouersgedeelte van verlies in 'n filiaal		—	—	116	83
GROEPWINS		**5 750**	**1 076**	**5 226**	**868**
Inkomste behou aan begin van die jaar		748	846	1 028	1 200
BESKIKBAAR VIR AANWENDING		**6 498**	**1 922**	**6 254**	**2 068**
Dividende	19	1 350	40	1 350	40
Voorsiening vir verliese in filiaalmaatskappye		469	134	—	—
Oordrag na verdeelbare reserwes	4	4 000	1 000	4 000	1 000
INKOMSTE BEHOU AAN EINDE VAN DIE JAAR		**679**	**748**	**904**	**1 028**

Balansstaat

31 DESEMBER 1974

	Aantekening	USKO 1974 R'000	USKO 1973 R'000	GROEP 1974 R'000	GROEP 1973 R'000
KAPITAAL AANGEWEND					
Gewone aandelekapitaal	2	14 505	14 505	14 505	14 505
Verdeelbare reserwes	3	15 491	11 560	15 807	11 914
GEWONE AANDEELHOUERSBELANG		**29 996**	**26 065**	**30 312**	**26 419**
Voorkeuraandelekapitaal	2	500	500	500	500
TOTALE AANDEELHOUERSBELANG		**30 496**	**26 565**	**30 812**	**26 919**
Buite-aandeelhouersbelang		—	—	—	116
Uitgestelde belasting		1 484	619	1 657	619
Langtermynlenings	5	17 387	16 570	21 095	20 795
TOTALE KAPITAAL AANGEWEND		**49 367**	**43 754**	**53 564**	**48 449**
AANWENDING VAN KAPITAAL					
VASTE BATES	6	**24 472**	**23 200**	**31 078**	**29 963**
BELEGGINGS	8	**2 707**	**2 767**	**2 707**	**2 767**
FILIAALMAATSKAPPYE	9	**10 440**	**6 290**	—	—
LANGTERMYNDEBITEURE	10	—	—	**1 808**	**1 577**
BEDRYFSBATES					
Voorraad	11	20 195	13 859	24 300	16 064
Debiteure		9 621	11 599	13 382	13 328
Oproepbare gelde en deposito's		1 384	—	1 490	106
Banksaldo's en kontant		78	21	78	24
TOTALE BEDRYFSBATES		**31 278**	**25 479**	**39 250**	**29 522**
BEDRYFSLASTE					
Oortrokke bankrekening		4 346	1 821	4 346	1 823
Korttermynlenings		8 163	6 000	8 667	6 501
Krediteure		6 646	7 432	7 934	8 380
Aandeelhouers vir dividende		1 330	20	1 330	20
TOTALE BEDRYFSLASTE		**20 485**	**15 273**	**22 277**	**16 724**
NETTO BEDRYFSBATES		**10 793**	**10 206**	**16 973**	**12 798**
UITGESTELDE UITGAWES	12	**955**	**1 291**	**998**	**1 344**
TOTALE AANWENDING VAN KAPITAAL		**49 367**	**43 754**	**53 564**	**48 449**

KAPITAAL AANGEWEND					
Gewone aandelekapitaal	2	14 505	14 505	14 505	14 505
Verdeelbare reserwes	3	15 491	11 560	15 807	11 914
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Voorkeuraandelekapitaal	2	500	500	500	500
TOTALE AANDEELHOUERSBELANG		**30 496**	**26 565**	**30 812**	**26 919**
Buite-aandeelhouersbelang		—	—	—	116
Uitgestelde belasting		1 484	619	1 657	619
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LANGTERMYNDEBITEURE	10	—	—	**1 808**	**1 577**
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TOTALE AANWENDING VAN KAPITAAL		**49 367**	**43 754**	**53 564**	**48 449**

Aantekeninge tot die Finansiële Jaarstate

31 Desember 1974

1. REKENINGKUNDIGE BELEID

1.1 Omset

Omset verteenwoordig totale netto gefaktureerde verkope, intermaatskappytransaksies uitgesluit.

1.2 Waardevermindering

Waardevermindering word voorsien oor die verwagte lewensduurte van vaste bates op verminderde saldo of reguitlynmetode teen koerse wat bereken is om die boekwaardes van die bates tot hulle beraamde oorblywende waardes te verminder.

1.3 Belasting

Normale belasting word bereken op die wins vir die jaar, nadat beleggings- en aanvangstoelaes op kapitaaluitgawes, grensgebiedtoelaès en belastingverliese van vorige jare in aanmerking geneem is.
Uitgestelde belasting word voorsien teen huidige belastingkoerse op die tydsverskille tussen die netto boekwaardes van bates wat vir belastingtoelaes kwalifiseer, en hul belastingwaardes.

1.4 Voorraad

Die metode van waardering van voorraad kom ooreen met die metode van die vorige jaar.
Grondstowwe en verbruiksvoorrade is gewaardeer teen die laagste van kosprys (op eerste-in, eerste-uit metode) of netto realiseerbare waarde.
Onvoltooide werk en klaarprodukte is gewaardeer teen standaardkoste (wat grondstowwe, direkte en indirekte bokoste insluit) en verminder na netto realiseerbare waarde indien laer.
Voorsiening is gemaak vir verouderde en stadig-bewegende voorraad.

1.5 Buitelandse valuta

Buitelandse bates en laste is omgereken teen wisselkoerse wat by benadering gelyk is aan die heersende koerse op 31 Desember 1974.

	USKO		GROEP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
2. AANDELEKAPITAAL gemagtig, uitgereik en ten volle opbetaal				
125 000 Voorkeur „A" aandele van R2 elk	250	250	250	250
125 000 Voorkeur „B" aandele van R2 elk	250	250	250	250
	500	500	500	500
29 010 000 Gewone aandele van 50 sent elk	14 505	14 505	14 505	14 505
	15 005	15 005	15 005	15 005
3. VERDEELBARE RESERWES				
Reserwe vir vervanging van vaste bates	7 552	4 552	7 603	4 586
Algemene reserwe	7 260	6 260	7 300	6 300
Inkomste behou	679	748	904	1 028
	15 491	11 560	15 807	11 914
4. BEWEGINGS OP VERDEELBARE RESERWES				
Oordrag na reserwe vir vervanging van vaste bates	3 000	1 000	3 000	1 000
Oordrag na algemene reserwe	1 000	—	1 000	—
	4 000	1 000	4 000	1 000
Oorskot van voorsiening vir waardevermindering as gevolg van herwaardering van aanleg in 'n filiaalmaatskappy oorgedra na reserwe vir vervanging van vaste bates met konsolidasie	—	—	17	34
	4 000	1 000	4 017	1 034

1.2 **Waardevermindering**

Waardevermindering word voorsien oor die verwagte lewensduurte van vaste bates op verminderde saldo of reguitlynmetode teen koerse wat bereken is om die boekwaardes van die bates tot hulle beraamde oorblywende waardes te verminder.

1.3 **Belasting**

Normale belasting word bereken op die wins vir die jaar, nadat beleggings- en aanvangstoelaes op kapitaaluitgawes, grensgebiedtoelaès en belastingverliese van vorige jare in aanmerking geneem is.

Uitgestelde belasting word voorsien teen huidige belastingkoerse op die tydsverskille tussen die netto boekwaardes van bates wat vir belastingtoelaes kwalifiseer, en hul belastingwaardes.

1.4 **Voorraad**

Die metode van waardering van voorraad kom ooreen met die metode van die vorige jaar.

Grondstowwe en verbruiksvoorrade is gewaardeer teen die laagste van kosprys (op eerste-in, eerste-uit metode) of netto realiseerbare waarde.

Onvoltooide werk en klaarprodukte is gewaardeer teen standaardkoste (wat grondstowwe, direkte en indirekte bokoste insluit) en verminder na netto realiseerbare waarde indien laer.

Voorsiening is gemaak vir verouderde en stadig-bewegende voorraad.

1.5 **Buitelandse valuta**

Buitelandse bates en laste is omgereken teen wisselkoerse wat by benadering gelyk is aan die heersende koerse op 31 Desember 1974.

	USKO		GROEP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
2. AANDELEKAPITAAL gemagtig, uitgereik en ten volle opbetaal				
125 000 Voorkeur „A" aandele van R2 elk	250	250	250	250
125 000 Voorkeur „B" aandele van R2 elk	250	250	250	250
	500	500	500	500
29 010 000 Gewone aandele van 50 sent elk	14 505	14 505	14 505	14 505
	15 005	15 005	15 005	15 005
3. VERDEELBARE RESERWES				
Reserwe vir vervanging van vaste bates	7 552	4 552	7 603	4 586
Algemene reserwe	7 260	6 260	7 300	6 300
Inkomste behou	679	748	904	1 028
	15 491	11 560	15 807	11 914
4. BEWEGINGS OP VERDEELBARE RESERWES				
Oordrag na reserwe vir vervanging van vaste bates	3 000	1 000	3 000	1 000
Oordrag na algemene reserwe	1 000	—	1 000	—
	4 000	1 000	4 000	1 000
Oorskot van voorsiening vir waardevermindering as gevolg van herwaardering van aanleg in 'n filiaalmaatskappy oorgedra na reserwe vir vervanging van vaste bates met konsolidasie	—	—	17	34
	4 000	1 000	4 017	1 034

	USKO		GROEP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
5. LANGTERMYNLENINGS				
5.1 Oorsese lenings				
Wentelkredietlening Nr. 1. Die fasiliteit van hierdie lening verminder met die helfte op 6 Februarie 1977 en die balans verval op 6 Februarie 1978. Huidige effektiewe rentekoers 12,96 persent per jaar, hersienbaar drie- of sesmaandeliks. Hierdie lening is gedek deur 'n valuta-termynkontrak en die effektiewe rentekoers sluit die koste van hierdie dekking in	5 954	5 561	5 954	5 561
Wentelkredietlening Nr. 2. Hierdie lening is gedurende die jaar terugbetaal	—	5 376	—	5 376
Vastetermynlening terugbetaalbaar in twee gelyke paaiemente op 7 November 1976 en 7 November 1977. Effektiewe rentekoers 10 persent per jaar. Hierdie lening is gedek deur 'n valuta-termynkontrak en die effektiewe rentekoers sluit die koste van hierdie dekking in	5 633	5 633	5 633	5 633
5.2 Plaaslike lenings				
Vastetermynlening terugbetaalbaar in drie gelyke jaarlikse paaiemente vanaf 1 Junie 1979. Rentekoers 9,5 persent per jaar	4 000	—	4 000	—
Vastetermynlening terugbetaalbaar in twee gelyke paaiemente op 1 Oktober 1978 en 1 Oktober 1979. Rentekoers 12,5 persent per jaar	1 800	—	1 800	—
5.3 Grensgebiedlenings aan filiaalmaatskappye, gewaarborg deur Usko				
Nr. 1 aan 'n filiaalmaatskappy ten opsigte van grond en geboue, terugbetaalbaar in twee-en-dertig gelyke kwartaallikse paaiemente van R65 750. Rentevry tot 28 Oktober 1976 en daarna teen 6 persent per jaar	—	—	2 104	2 367
Nr. 2 aan 'n filiaalmaatskappy ten opsigte van aanleg en masjinerie, terugbetaalbaar in vier-en-twintig gelyke kwartaallikse paaiemente van R52 187. Rente teen 4 persent per jaar tot 28 Oktober 1976 en daarna teen 6 persent per jaar	—	—	1 253	1 461
Behuisingslenings terugbetaalbaar in gelyke maandelikse paaiemente van R5 370 (insluitende rente) oor twintig jaar eindigende 1992. Huidige rentekoers 6 persent per jaar. Hierdie lenings is verseker deur eerste verbande oor behuisingseiendomme	—	—	681	717
5.4 Ander behuisingslenings				
Verseker – terugbetaalbaar in gelyke maandelikse paaiemente van R1 135 (insluitende rente) tot 1993. Rentekoers 10,5 persent per jaar. Verseker deur eerste verbande oor behuisingseiendomme	—	—	110	112
Onverseker – terugbetaalbaar in gelyke maandelikse paaiemente van R842 (insluitende rente) eindigende 1982. Rentekoers 6,5 persent per jaar	—	—	63	69
	17 387	16 570	21 598	21 296
Min paaiemente terugbetaalbaar binne een jaar ingesluit by korttermynlenings	—	—	503	501
	17 387	16 570	21 095	20 795

	USKO		GROEP	
	1974	1973	1974	1973
6. VASTE BATES	R'000	R'000	R'000	R'000
6.1 Kosprys				
Nywerheidseiendom en verbeteringe daarop	131	131	901	901
Nywerheidsgeboue en sylyne	9 694	8 412	11 806	10 523
Eiendomme aan Usko Behuisingsmaatskappy verhuur	267	267	267	267
Behuisingseiendomme	—	—	990	940
Aanleg en masjinerie	37 981	28 196	41 833	31 914
Kantoormeubels, toerusting en motorvoertuie	629	702	671	753
Kapitaaluitbreidings in aanbou	941	8 586	1 123	8 591
Patente	—	—	—	171
	49 643	46 294	57 591	54 060
6.2 Opgehoopte waardevermindering				
Nywerheidseiendom en verbeteringe daarop	79	79	79	79
Nywerheidsgeboue en sylyne	4 491	4 255	4 754	4 429
Eiendomme aan Usko Behuisingsmaatskappy verhuur	184	180	184	180
Behuisingseiendomme	—	—	—	—
Aanleg en masjinerie	20 012	18 136	21 071	18 937
Kantoormeubels, toerusting en motorvoertuie	405	444	425	472
Kapitaaluitbreidings in aanbou	—	—	—	—
Patente	—	—	—	—
	25 171	23 094	26 513	24 097
6.3 Boekwaarde				
Nywerheidseiendom en verbeteringe daarop	52	52	822	822
Nywerheidsgeboue en sylyne	5 203	4 157	7 052	6 094
Eiendomme aan Usko Behuisingsmaatskappy verhuur	83	87	83	87
Behuisingseiendomme	—	—	990	940
Aanleg en masjinerie	17 969	10 060	20 762	12 977
Kantoormeubels, toerusting en motorvoertuie	224	258	246	281
Kapitaaluitbreidings in aanbou	941	8 586	1 123	8 591
Patente	—	—	—	171
	24 472	23 200	31 078	29 963

6.4 Aanleg en geboue van sekere filiaalmaatskappye (boekwaarde R3 914 000; 1973 – R3 628 000) is opgerig op grond wat deur hierdie filiaalmaatskappye gekoop is, maar wat nog nie in hulle name geregistreer is nie.

6.5 Behuisingseiendomme met 'n boekwaarde van R683 000 (1973 – R688 000) is onderhewig aan eerste verbande ten gunste van krediteure vir behuisingslenings.

6.6 Registers van eiendomme en geboue is beskikbaar vir inspeksie deur lede of hulle behoorlik gemagtigde verteenwoordigers by die geregistreerde kantoor van die Korporasie.

7. VERPLIGTINGE				
Kontrakte vir kapitaaluitgawes	2 057	1 802	3 296	2 099
Verder het die direkteure die aankoop van geboue en aanleg gemagtig waarvoor kontrakte nog nie aangegaan is nie	4 160	783	4 798	815
Alle bogenoemde kapitaaluitgawes sal gefinansier word uit addisionele leningsfasiliteite.				
	6 217	2 585	8 094	2 914

	USKO		GROEP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
8. BELEGGINGS TEEN KOSPRYS				
Genoteer				
National Bolts Beperk 631 125 aandele van 50 sent elk (Markwaarde R631 000 1973 – R757 000)	506	506	506	506
Ongenoteer				
Gesamentlike onderneming in Transvaal Copper Rod Company	940	900	940	900
African Aluminium Company (Edms) Beperk	—	100	—	100
National Materials Service Corporation (Edms) Beperk	750	750	750	750
Hall & Pickles (Coastal) (Edms) Beperk	40	40	40	40
Veldmaster (Rhodesia) (Pvt) Limited	46	46	46	46
Alustang (Edms) Beperk	425	425	425	425
(Direkteurswaardasie van ongenoteerde beleggings R2 201 000; 1973 – R2 261 000)				
	2 201	2 261	2 201	2 261
	2 707	2 767	2 707	2 767
9. FILIAALMAATSKAPPYE				
Aandele teen kosprys	3 891	3 891		
Bedrae verskuldig deur filiale	7 152	4 130		
	11 043	8 021		
Min Voorsiening vir verliese	603	134		
	10 440	7 887		
Min Bedrae verskuldig aan filiale	—	1 597		
	10 440	6 290		
10. LANGTERMYNDEBITEURE				
Verseker deur verbande			426	573
Verseker deur huurkoopooreenkomste			1 382	1 004
			1 808	1 577
Hierdie sluit in bedrae verskuldig deur werknemers ten opsigte van behuisingseiendomme verkoop onder die Korporasie se behuisingskemas en is terugbetaalbaar in maandelikse paaiemente wat strek oor termyne van tot vyf-en-twintig jaar. Sekere eiendomme is onderhewig aan eerste verbande ten gunste van krediteure vir behuisingslenings.				
11. VOORRAAD				
Grondstowwe	7 279	4 346	9 355	5 327
Verbruiksvoorrade	3 053	2 407	3 311	2 561
Onvoltooide werk	7 761	5 857	8 838	6 632
Klaarprodukte	2 102	1 249	2 796	1 544
	20 195	13 859	24 300	16 064
12. UITGESTELDE UITGAWES				
Inbedryfstellingskoste op nuwe staalsmeltaanleg afgeskryf oor vyf jaar vanaf 1973	557	743	557	743
Wisselkoersverskille en bestuursgelde op oorsese langtermyn-lenings afgeskryf oor termyn van die lenings	206	294	206	294
Ander uitgawes	192	254	235	307
	955	1 291	998	1 344

	USKO		GROEP	
	1974 R'000	1973 R'000	1974 R'000	1973 R'000
13. VOORWAARDELIKE AANSPREEKLIKHEDE				
Waarborge aan bouverenigings vir werknemersbehuisingslenings	1 108	1 219	1 108	1 219
Uitstaande oproepe op gedeeltelik-opbetaalde aandele in 'n filiaalmaatskappy	50	50	—	—
Waarborg van 'n lening toegestaan aan 'n verwante maatskappy	450	450	450	450
14. BEDRYFSWINS				
Die bedryfswins is verkry nadat die volgende items in berekening gebring is:				
Verlies op vervreemding van vaste bates	15	48	18	44
Ouditeursvergoeding – oudit	20	15	29	22
– ander dienste	2	1	2	1
Huur van toerusting	233	270	234	270
Sekretariële dienste	33	32	33	32
15. BESOLDIGING VAN DIREKTEURE				
Vir dienste as direkteure	26	18		
Vir ander dienste	35	8		
	61	26		
16. INKOMSTE UIT BELEGGINGS				
Genoteer				
Dividende	75	63	75	63
Bestuursvergoeding	32	29	32	29
	107	92	107	92
Ongenoteer	479	457	479	457
	586	549	586	549
17. INKOMSTE UIT FILIAALMAATSKAPPYE				
Dividende	500	50		
Rente	285	139		
Bestuursvergoeding	118	129		
	903	318		
18. BELASTING				
Suid-Afrikaanse normale belasting	65	—	100	—
Uitgestelde belasting – Huidige jaar	1240	569	1 413	557
– Aansuiwering ten opsigte van vorige jare	(375)	—	(375)	—
	930	569	1 138	557
19. DIVIDENDE				
Voorkeur „A" en „B" aandele				
Betaal 8 sent per aandeel (4%)	20	20	20	20
Voorgestel 10 sent per aandeel (5%) (1973: 16 sent per aandeel – 8%)	25	20	25	20
	45	40	45	40
Gewone aandele				
Voorgestel 4,5 sent per aandeel (9%)	1 305	—	1 305	—
	1 350	40	1 350	40

Staat van bron en aanwending van fondse

VIR DIE JAAR GEËINDIG 31 DESEMBER 1974

	USKO R'000	GROEP R'000
BRON VAN FONDSE		
Wins vir die jaar	6 680	6 248
Waardevermindering en bedrae afgeskryf	2 649	3 046
Fondse verkry uit besigheidsbedrywighede	**9 329**	**9 294**
Verkoop van aanleg en toerusting	39	46
Verkoop van behuisingseiendomme aan werknemers	—	489
Vermindering in ongenoteerde beleggings	60	60
Langtermynlenings aangegaan	6 193	6 193
Totale bron van fondse	**15 621**	**16 082**
AANWENDING VAN FONDSE		
Aankoop van geboue, aanleg en toerusting	3 624	3 825
Aankoop van behuisingseiendomme	—	508
Terugbetaling van langtermynlenings	5 376	5 893
Vermeerdering van belang in filiaalmaatskappye	4 619	—
Vermeerdering in langtermyndebiteure	—	231
Belasting	65	100
Dividende	1 350	1 350
Netto toename in bedryfskapitaal	587	4 175
Totale aanwending van fondse	**15 621**	**16 082**
VERANDERINGE IN BEDRYFSKAPITAAL		
Vermeerdering voorraad	6 336	8 236
Vermeerdering oproepbare gelde	1 384	1 385
Vermeerdering bank en kontant	57	54
Vermindering krediteure	786	446
Toename in bedryfskapitaal	**8 563**	**10 121**
Vermindering debiteure	1 978	(53)
Vermeerdering oortrokke bankrekening	2 525	2 523
Vermeerdering aandeelhouers vir dividende	1 310	1 310
Vermeerdering korttermynlenings	2 163	2 166
Afname in bedryfskapitaal	**7 976**	**5 946**
Netto toename in bedryfskapitaal	**587**	**4 175**

	R'000	R'000
BRON VAN FONDSE		
Wins vir die jaar	6 680	6 248
Waardevermindering en bedrae afgeskryf	2 649	3 046
Fondse verkry uit besigheidsbedrywighede	**9 329**	**9 294**
Verkoop van aanleg en toerusting	39	46
Verkoop van behuisingseiendomme aan werknemers	—	489
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Netto toename in bedryfskapitaal	**587**	**4 175**

Groep Vyfjaar Oorsig

	1974	1973	1972	1971	1970
BEDRYFSRESULTATE (R000'e)					
Staal verkope	55 996	44 532	32 615	31 067	28 911
Koper en aluminium verkope	78 014	59 671	44 284	39 367	45 911
Totale verkope	134 010	104 203	76 899	70 434	74 822
Wins voor belasting	6 364	1 425	751	2 735	4 407
Belasting en uitgestelde belasting	1 138	557	(425)	1 076	1 747
Wins na belasting	5 226	868	1 176	1 659	2 660
Buitengewone inkomste	17	34	—	—	235
Dividende	1 350	40	40	983	1 350
Inkomste behou (periode)	3 893	862	1 136	676	1 545
Verdeelbare reserwes	15 807	11 914	11 052	9 916	9 240
Gewone aandelekapitaal	14 505	14 505	14 505	14 505	14 505
Voorkeur aandelekapitaal	500	500	500	500	500
Aandeelhouersbelang	30 812	26 919	26 057	24 921	24 245
FINANSIËLE INLIGTING (R000'e)					
Bedryfsbates	39 250	29 522	29 840	25 433	21 982
Bedryfslaste	22 277	16 724	10 725	11 987	7 008
Bedryfskapitaal	16 973	12 798	19 115	13 446	14 974
Ander bates	5 513	5 688	5 337	3 352	2 397
Vaste bates teen boekwaarde	31 078	29 963	24 018	15 951	10 764
Langtermynverpligtinge	22 752	21 530	22 413	7 828	3 890
Aandeelhouersbelang	30 812	26 919	26 057	24 921	24 245
BRON VAN FONDSE					
Aandeelhouersbelang	40,6	41,3	44,1	55,7	69,0
Langtermynverpligtinge	30,0	33,0	37,9	17,5	11,1
Bedryfslaste	29,4	25,7	18,0	26,8	19,9
	100,0%	100,0%	100,0%	100,0%	100,0%
AANWENDING VAN FONDSE					
Debiteure	17,7	20,2	17,5	19,2	20,6
Voorraad	32,0	24,6	24,1	36,4	34,0
Vaste bates teen boekwaarde	41,0	46,0	40,6	35,7	30,6
Ander bates	9,3	9,2	17,8	8,7	14,8
	100,0%	100,0%	100,0%	100,0%	100,0%
KERN DATA					
Salarisse en lone (R000'e)	13 470	15 519	12 651	11 898	10 512
Aantal werknemers	6 030	5 931	5 697	5 315	5 336
Aantal gewone aandele (000'e)	29 010	29 010	29 010	29 010	29 010
Kontantvloei (R000'e)	9 294	3 923	2 700	2 991	4 162
Verdienste per gewone aandeel	17,86c	2,85c	3,92c	5,58c	9,01c
Dividende per gewone aandeel	4,50c	—	—	3,25c	4,50c
Inkomste behou per gewone aandeel	13,36c	2,85c	3,92c	2,33c	4,51c
Netto waarde per gewone aandeel	104,49c	91,06c	88,10c	84,18c	81,85c
Dividenddekking	4,0	—	—	1,7	2,0
Bedryfsverhouding	1,8:1	1,8:1	2,8:1	2,1:1	3,1:1
Belaste wins op aandeelhouersbelang	17,0%	3,2%	4,5%	6,6%	11,0%
Verkope (groei)	28,6%	35,5%	9,2%	(5,9%)	12,4%
Aandeelhouersbelang (groei)	14,5%	3,3%	4,6%	2,8%	6,8%

Gedruk deur Lisko

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Gedruk deur Usko

Stewarts & Lloyds of South Africa Ltd annual report/jaarverslag 51: 1977

Stewarts + Lloyds Salister Diesels BAS Tubewrights Alers Hankey Tosa Maksal Salvalve Vivian J + C Malleable AMF Koolmaster Salweir Weiser Vivian-Colt Fultons Baldwins-Hankey Vivian Transmission Bundy Tubing Pipe Couplings Vivians Tosa Vivian + Watson Plasal Vivian J + C Malleable Salister Incledon Bundy Tubing Alers Hankey (Expanded Metal) Baldwins Tubewrights Stewarts + Lloyds Weiser Pipe Couplings AMF Koolmaster Vivian + Watson Salister Diesels Alers Hankey Salweir Vivians Salvalve AMF Koolmaster Alers Hankey (Expanded Metal) Bundy Tubing Salchain Baldwins Salweir Plasal Vivian-Colt Vivian Salvalve Incledon Tubewrights Weiser Pipe Couplings Stewarts + Lloyds Tosa Vivian + Watson Maksal Alers Hankey Fultons BAS Salister Plasal Baldwins-Hankey Vivian-Colt Tosa Bundy Tubing Pipe Couplings Alers Hankey (Expanded Metal) Plasal Baldwins-Hankey Incledon Vivian AMF Koolmaster BAS J + C Malleable Tubewrights Maksal Tosa Weiser Baldwins-Hankey Vivian Transmission Fultons Salvalve Alers Hankey Vivians Salister Salister Diesels Salweir Incledon Alers Hankey (Expanded Metal) Baldwins Vivian + Watson BAS Salister Diesels Vivian-Colt Vivians Stewarts + Lloyds Alers Hankey Tosa J + C Malleable Tosa AMF Koolmaster Salchain Weiser Vivian + Watson Bundy Tubing Baldwins Salister Diesels Tubewrights Maksal Vivian-Colt Vivian Stewarts + Lloyds Incledon Tosa Fultons J + C Malleable Baldwins Salweir Baldwins-Hankey Weiser Vivian Transmission AMF Koolmaster Plasal Salvalve Maksal Salister Bundy Tubing Baldwins-Hankey Salweir Alers Hankey (Expanded Metal) Vivian Pipe Couplings Tubewrights Plasal BAS Pipe Couplings Vivians Salister Diesels Tosa Fultons J + C Malleable Vivian Transmission Maksal Stewarts + Lloyds Vivian Pipe Couplings Tosa Salvalve Weiser Vivian-Colt Incledon BAS Vivian Transmission Salchain

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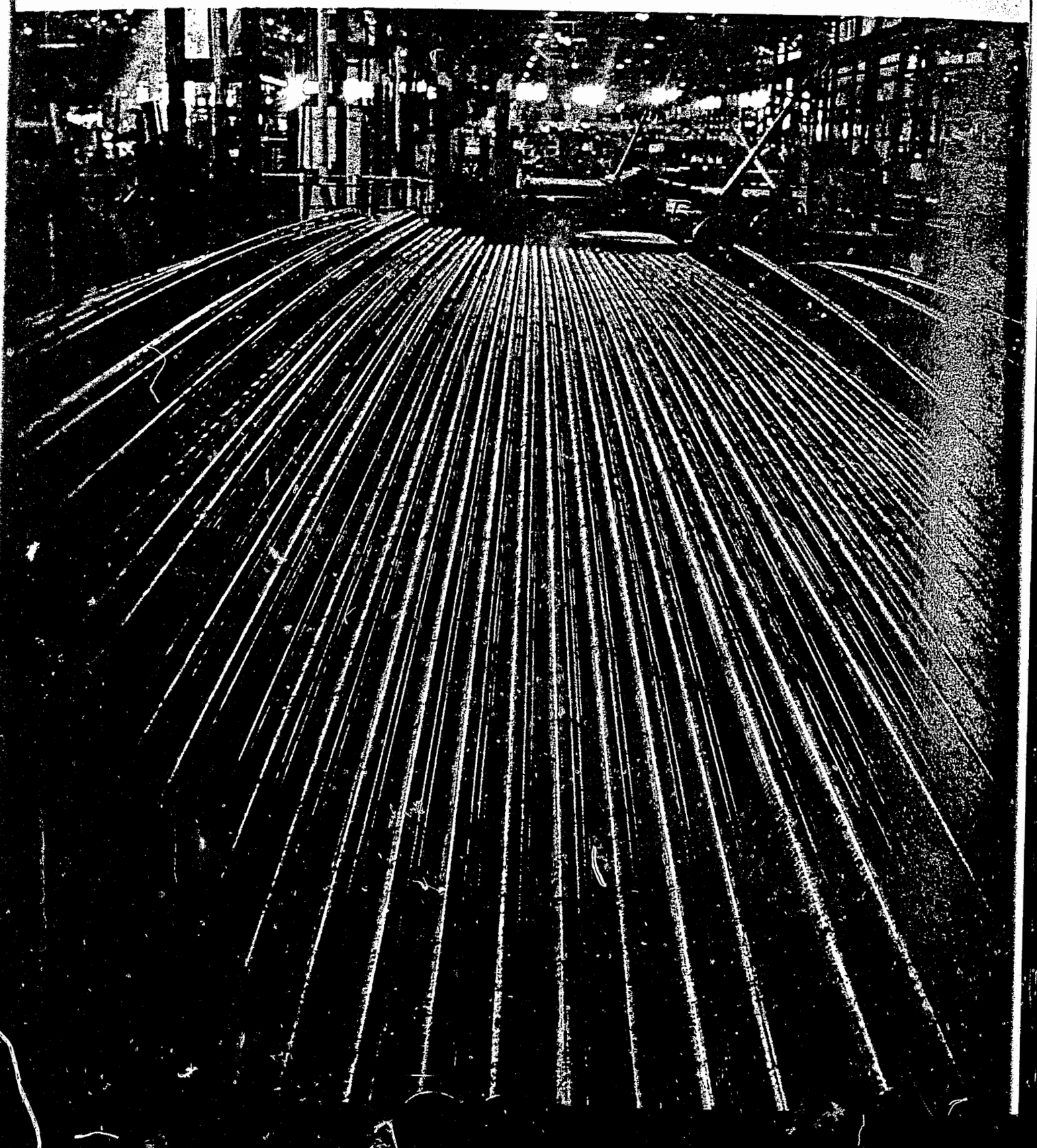
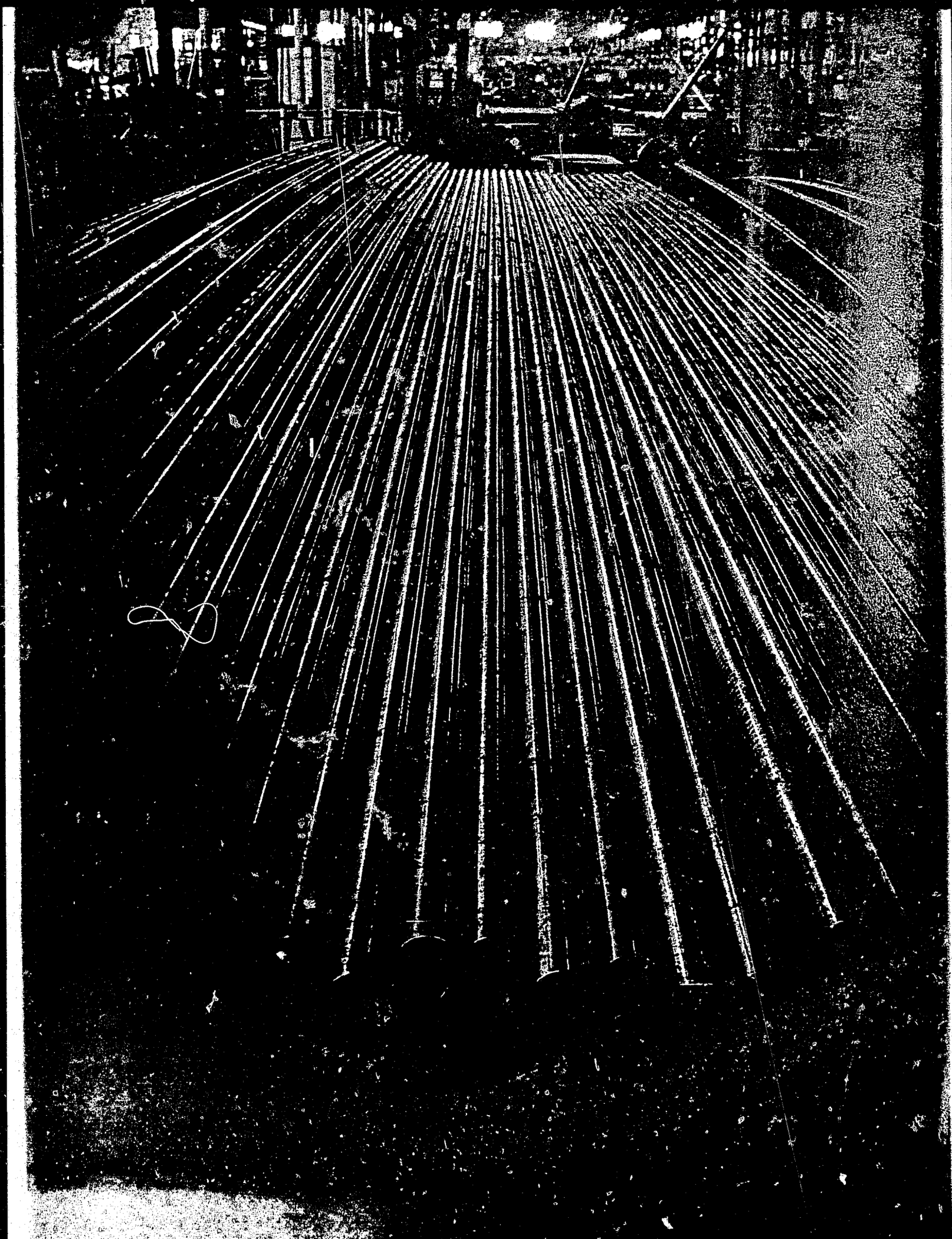
Seamless steel tubes waiting to be cold drawn at Tosa works, Vereeniging.

Naatlose staalpype voor koudtrekking by die Tosa-werke, Vereeniging.





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Exchange rates

These financial statements are compiled in South African rand. To facilitate conversion, this table gives the value of R1,00 against selected currencies based on the middle rate of exchange ruling at 30 September 1977.

American dollar	1,1500
Pound sterling	1,5173
German mark	2,6701
French franc	5,6637
Japanese yen	305,38
Rhodesian dollar	0,7463
Australian dollar	1,0423

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54	Resultate en finansiële stand van die groep, aangesuiwer vir die uitwerking van inflasie
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Wisselkoerse

Hierdie finansiële state is in Suid-Afrikaanse rand opgestel. Ten einde omrekening te vergemaklik, toon hierdie tabel die waarde van R1,00 teenoor bepaalde valutas, gegrond op die gemiddelde wisselkoers wat op 30 September 1977 van krag was.

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Notice of meeting

Notice is hereby given that the fifty-first annual general meeting of members of Stewarts & Lloyds of South Africa Limited will be held at the Johannesburg office of the Company, 36 Simmonds Southway, Park Central, Johannesburg, on Friday, 24 February 1978, at 10h45.

1 To receive and consider the annual financial statements for the year ended 30 September 1977, together with the reports of the directors and auditors.

2 To elect directors in the place of those retiring in terms of the Company's articles.

3 To approve the fees payable to directors.

4 To fix the remuneration of the auditors for the year ended 30 September 1977.

5 To extend, in accordance with Section 221 of the Companies Act, 1973, the general authority granted to directors to allot and issue the unissued shares of the Company at their discretion, until the next annual general meeting.

6 To transact any other business which may be transacted at an annual general meeting.

A member entitled to attend and vote at the abovementioned meeting is entitled to appoint a proxy to attend and speak and on a poll to vote in his stead. A proxy need not be a member of the Company.

Proxy forms should be forwarded to reach the registered office of the Company not less than 48 hours before the time of holding the meeting.

For the purpose of determining those shareholders entitled to attend and vote at the meeting the register of members will be closed from 18 to 24 February 1978, both dates inclusive.

By order of the board
E. A. Johnson, Group Secretary
Registered office
Corner Voortrekker Street and
Rhodes Avenue
(Box 74)
Vereeniging
1930
24 November 1977

Kennisgewing van vergadering

Kennis geskied hiermee dat die een en vyftigste algemene jaarvergadering van lede van Stewarts & Lloyds of South Africa Limited om 10h45 op Vrydag, 24 Februarie 1978, gehou sal word by die Johannesburgse kantoor van die Maatskappy, Simmonds-Suidweg 36, Park Central, Johannesburg.

1 Om die finansiële jaarstate vir die jaar geëindig 30 September 1977, tesame met die verslae van die direkteure en ouditeure, in ontvangs te neem en te oorweeg.

2 Om direkteure te kies in die plek van dié wat ingevolge die Maatskappy se statute uittree.

3 Om die vergoeding wat aan direkteure betaalbaar is, goed te keur.

4 Om die vergoeding van die ouditeure vir die jaar geëindig 30 September 1977, vas te stel.

5 Om ingevolge Artikel 221 van die Maatskappywet, 1973, die algemene magtiging wat aan direkteure verleen is om die onuitgereikte aandele van die Maatskappy na hul goeddunke toe te ken en uit te reik, tot die volgende algemene jaarvergadering te verleng.

6 Om enige ander besigheid te verrig wat op 'n algemene jaarvergadering verrig kan word.

'n Lid wat daarop geregtig is om die bogenoemde vergadering by te woon en daartydens te stem, is daarop geregtig om 'n gevolmagtigde aan te stel om die vergadering namens hom by te woon, aan besprekings deel te neem en by 'n stemming, namens hom te stem. 'n Gevolmagtigde hoef nie 'n lid van die Maatskappy te wees nie.

Volmagvorms moet ingestuur word sodat hulle die geregistreerde kantoor van die Maatskappy minstens 48 uur voor die bestemde tyd van die vergadering bereik.

Ten einde vas te stel watter aandeelhouers geregtig is om die vergadering by te woon en te stem, sal die lederegister vanaf 18 tot 24 Februarie 1978 gesluit wees, albei datums inbegrepe.

Op las van die raad
E. A. Johnson, Groepsekretaris
Geregistreerde kantoor
h/v Voortrekkerstraat en Rhodeslaan
(Posbus 74)
Vereeniging
1930
24 November 1977

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6 To transact any other business which may be transacted at an annual general meeting.

A member entitled to attend and vote at the abovementioned meeting is entitled to appoint a proxy to attend and speak and on a poll to vote in his stead. A proxy need not be a member of the Company.

Proxy forms should be forwarded to reach the registered office of the Company not less than 48 hours before the time of holding the meeting.

For the purpose of determining those shareholders entitled to attend and vote at the meeting the register of members will be closed from 18 to 24 February 1978, both dates inclusive.

By order of the board
E. A. Johnson, Group Secretary
Registered office
Corner Voortrekker Street and
Rhodes Avenue
(Box 74)
Vereeniging
1930
24 November 1977

gehou sal word by die Johannesburgse kantoor van die Maatskappy, Simmonds-Suidweg 36, Park Central, Johannesburg.

1 Om die finansiële jaarstate vir die jaar geëindig 30 September 1977, tesame met die verslae van die direkteure en ouditeure, in ontvangs te neem en te oorweeg.

2 Om direkteure te kies in die plek van dié wat ingevolge die Maatskappy se statute uittree.

3 Om die vergoeding wat aan direkteure betaalbaar is, goed te keur.

4 Om die vergoeding van die ouditeure vir die jaar geëindig 30 September 1977, vas te stel.

5 Om ingevolge Artikel 221 van die Maatskappywet, 1973, die algemene magtiging wat aan direkteure verleen is om die onuitgereikte aandele van die Maatskappy na hul goeddunke toe te ken en uit te reik, tot die volgende algemene jaarvergadering te verleng.

6 Om enige ander besigheid te verrig wat op 'n algemene jaarvergadering verrig kan word.

'n Lid wat daarop geregtig is om die bogenoemde vergadering by te woon en daartydens te stem, is daarop geregtig om 'n gevolmagtigde aan te stel om die vergadering namens hom by te woon, aan besprekings deel te neem en by 'n stemming, namens hom te stem. 'n Gevolmagtigde hoef nie 'n lid van die Maatskappy te wees nie.

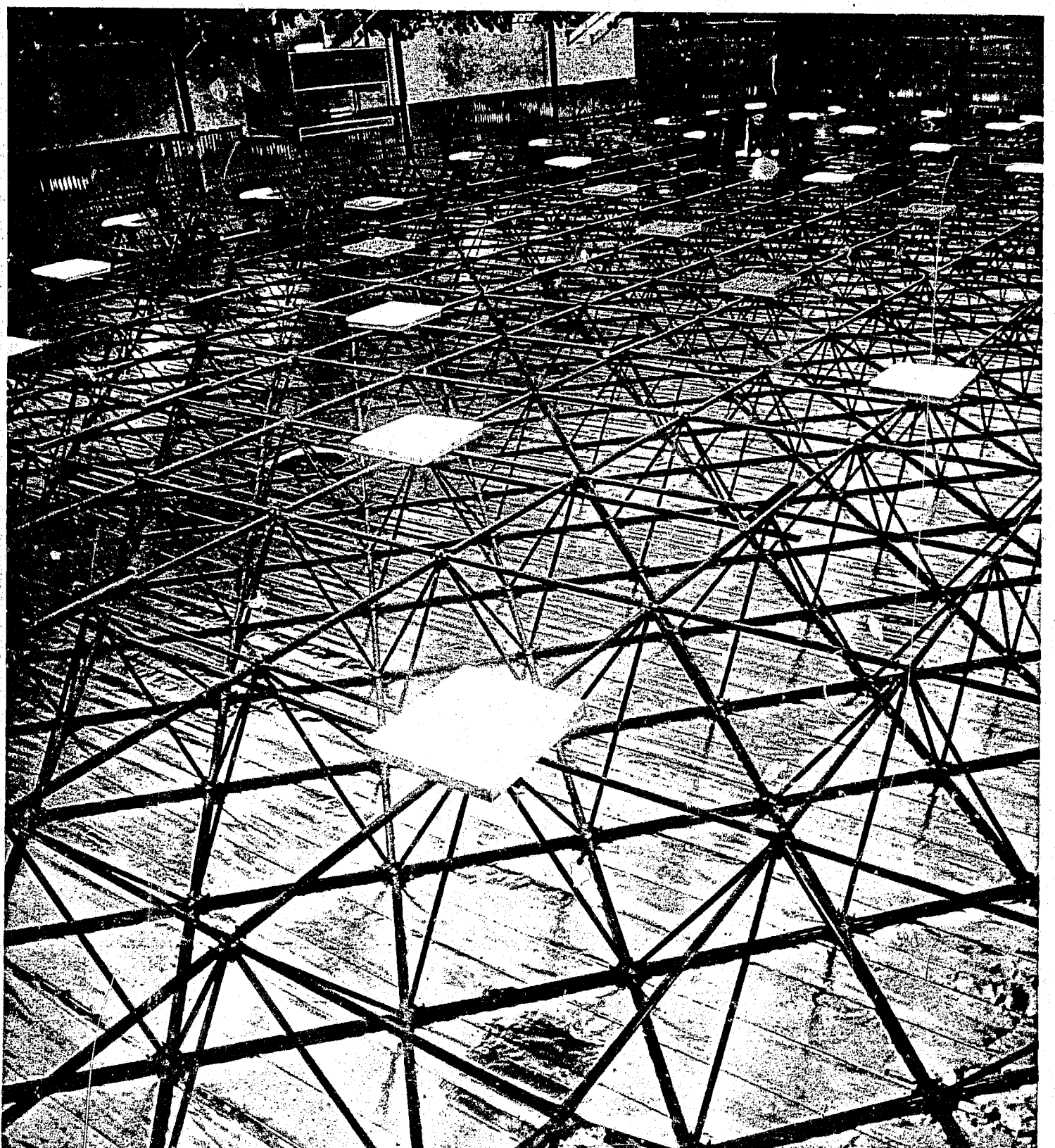
Volmagvorms moet ingestuur word sodat hulle die geregistreerde kantoor van die Maatskappy minstens 48 uur voor die bestemde tyd van die vergadering bereik.

Ten einde vas te stel watter aandeelhouers geregtig is om die vergadering by te woon en te stem, sal die lederegister vanaf 18 tot 24 Februarie 1978 gesluit wees, albei datums inbegrepe.

Op las van die raad
E. A. Johnson, Groepsekretaris
Geregistreerde kantoor
h/v Voortrekkerstraat en Rhodeslaan
(Posbus 74)
Vereeniging
1930
24 November 1977

An outstanding example of a 'Unibat' spaceframe is the roof of the Horizon View ice rink, at Roodepoort. It has a clear span of 66 m x 35 m and was lifted in one piece from the ground on to the supporting columns.

'n Uitstekende voorbeeld van 'n ‚Unibat'-spasieerraam is die dak van die Horizon View-ysbaan by Roodepoort. Dit het 'n onbelemmerde spanwydte van 66 m x 35 m en is as 'n eenheid vanaf die grond tot bo-op die steunpilare opgehys.



Financial highlights and ten year financial review 1968-1977

	1977 R000	1976 R000	1975 R000	1974 R000	1973 R000
Operating results					
Turnover	**206 030**	**207 866**	**204 967**	**179 265**	**136 948**
Annual increase/(decrease) in turnover (%)	**(0,88)**	**1,41**	**14,34**	**30,90**	**22,24**
Income before taxation	**13 903**	**18 094**	**21 607**	**17 923**	**9 788**
Taxation	5 162	7 191	8 524	7 765	4 057
Income after taxation	8 741	10 903	13 083	10 158	5 731
Attributable to ordinary shareholders					
Earnings—after preference dividend	7 934	10 135	12 528	9 283	5 148
Dividends paid—ordinary	3 874	3 827	3 827	2 926	2 251
Distributable income retained	4 003	6 295	8 497	5 859	2 716
Earnings per ordinary share (cents)	**35,1**	**45,0**	**55,7**	**41,2**	**22,9**
Ordinary dividend (cents)	**17**	**17**	**17**	**13**	**10**
Ordinary dividend cover	2,05	2,64	3,27	3,17	2,29
Earnings as a percentage of shareholders' funds at beginning of year (%)	10,76	15,04	21,49	17,73	10,44
Issued shares (thousands)	22 791	22 510	22 510	22 510	22 510
Net asset value of ordinary capital per 50c share (cents)	**350**	**328**	**299**	**259**	**233**
Share price during year (cents)					
High	**170**	**205**	**195**	**246**	**288**
Low	**135**	**150**	**145**	**120**	**150**
Capital employed					
Total capital employed	117 756	110 293	101 017	79 412	71 166
Preference and loan capital and other funds	38 055	36 538	33 610	21 116	18 809
Book value of ordinary shareholders' funds	79 701	73 755	67 407	58 296	52 357
Statistics					
Income before taxation to turnover (%)	6,75	8,70	10,54	10,00	7,15
Liquidity ratio	2,05	2,03	1,84	1,38	1,62
Depreciation charged	2 435	2 139	2 186	2 013	1 814
Gross additions to property, plant and equipment	3 716	3 334	3 481	5 254	2 770
Payroll and fringe benefits	42 828	44 010	41 702	33 193	25 204
Manning	9 848	10 199	11 819	12 066	10 664

Due to the acquisition of a number of subsidiaries in 1970 acquired for cash and shares the figures in prior years are not comparable.

*The dividend cover is related to the dividend on existing share capital at 27 September 1969 whilst the dividend declared includes the dividend on shares issued for the acquisition of J. H. Vivian & Co Ltd.

Operating results					
Turnover	206 030	207 866	204 967	179 265	136 948
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Finansiële hoogtepunte en finansiële oorsig die tien jaar 1968-1977

1972 R000	1971 R000	1970 R000	1969 R000	1968 R000	
					Bedryfsresultate
112 030	**108 290**	**80 418**	**51 798**	**51 099**	**Omset**
3,45	**34,66**	**55,25**	**1,37**	**8,58**	**Jaarlikse vermeerdering/(vermindering) in omset (%)**
5 906	**7 594**	**5 076**	**3 144**	**3 642**	**Inkomste voor belasting**
2 096	2 952	2 083	905	1 040	Belasting
3 810	4 642	2 993	2 239	2 602	Inkomste na belasting
					Toedeelbaar aan gewone aandeelhouers
3 277	4 305	2 880	2 196	2 584	Verdienste – na voorkeurdividend
2 026	2 026	1 400	1 125	908	Dividende betaal – gewone
1 250	2 217	1 596	962	1 502	Verdeelbare inkomste behou
14,6	**19,1**	**12,8**	**16,3**	**19,2**	**Verdienste per gewone aandeel (sent)**
9	**9**	**8**	**7,50***	**6,75**	**Gewone dividend (sent)**
1,62	2,12	1,60	2,18*	2,85	Gewone dividenddekking
6,99	9,42	9,48	7,49	9,35	Verdienste as 'n persentasie van aandeelhouersfondse aan begin van jaar (%)
22 510	22 510	22 510	13 452	13 452	Uitgereikte aandele (duisende)
219	**208**	**203**	**226**	**218**	**Netto batewaarde van gewone kapitaal per 50 sent aandeel (sent)**
					Aandeleprys gedurende jaar (sent)
175	**163**	**220**	**270**	**195**	**Hoog**
135	**110**	**125**	**160**	**100**	**Laag**
					Kapitaal aangewend
62 468	55 610	50 385	34 473	33 672	Totale kapitaal aangewend
13 135	8 758	4 697	4 101	4 371	Voorkeur- en leningskapitaal en ander fondse
49 333	46 852	45 688	30 372	29 301	Boekwaarde van gewone aandeelhouersfondse
					Statistieke
5,27	7,01	6,31	6,07	7,13	Inkomste voor belasting tot omset (%)
1,57	1,16	1,69	2,26	1,86	Likwiditeitsverhouding
1 698	1 587	1 007	771	855	Waardevermindering gedebiteer
3 834	5 492	7 441	889	785	Bruto toevoegings tot eiendom, aanleg en toerusting
22 259	20 880	15 295	12 513	12 292	Loonstaat en byvoordele
10 131	10 500	8 967	6 818	7 153	Arbeidskragte

Vanweë die verkryging van 'n aantal filiale in 1970, teen kontant en aandele, is die syfers in vorige jare nie vergelykbaar nie.
*Die dividenddekking het betrekking op die dividende op bestaande aandelekapitaal op 27 September 1969, terwyl die verklaarde dividend die dividend op aandele insluit wat met die oog op die oorname van J. H. Vivian & Co Ltd uitgereik is.

					Bedryfsresultate
112 030	108 290	80 418	51 798	51 099	**Omset**
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175	**163**	**220**	**270**	**195**	**Hoog**
135	**110**	**125**	**160**	**100**	**Laag**
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*Die dividenddekking het betrekking op die dividende op bestaande aandelekapitaal op 27 September 1969, terwyl die verklaarde dividend die dividend op aandele insluit wat met die oog op die oorname van J. H. Vivian & Co Ltd uitgereik is.

Directorate and administration

Directors
HC Kuiper *Chairman*
TM King *Deputy Chairman and Group Managing Director*
WG Boustred
WF Spence
Prof PW Hoek
JM Edwards *(British)*
HA Godwin
PF Joubert
PH Levick
IC Rauch
MW King
ME Llowarch *(British)*

Alternate directors
M Hall *(British)*
L Boyd *(British)*
GR Sloane
AW Lea

Group secretary
EA Johnson

Head office and Group secretary's address
36 Simmonds Southway, Park Central, Johannesburg
(Box 1189) Johannesburg 2000
Telephone 836-1111

Registered office
Corner Voortrekker Street and Rhodes Avenue
(Box 74) Vereeniging 1930
Telephone 22-2221

Transfer secretaries
Rand Registrars Limited
Devonshire House, Jorissen Street
Braamfontein, Johannesburg 2001

United Kingdom office
Kennedy Tower
St. Chads, Queensway
Birmingham B4 6JF

United Kingdom transfer secretaries
Charter Consolidated Limited
Charter House, Park Street
Ashford, Kent T24 8EQ

Bankers
The Standard Bank of South Africa Limited
Barclays National Bank Limited

Merchant bankers
Union Acceptances Limited

Auditors
Deloitte & Co.

Direksie en administrasie

Direkteure
HC Kuiper *Voorsitter*
TM King *Adjunk-Voorsitter en Groep-Besturende Direkteur*
WG Boustred
WF Spence
Prof PW Hoek
JM Edwards *(Brits)*
HA Godwin
PF Joubert
PH Levick
IC Rauch
MW King
ME Llowarch *(Brits)*

Alternatiewe direkteure
M Hall *(Brits)*
L Boyd *(Brits)*
GR Sloane
AW Lea

Groepsekretaris
EA Johnson

Hoofkantoor en Groepsekretaris se adres
Simmonds-Suidweg 36, Park Central, Johannesburg
(Posbus 1189) Johannesburg 2000
Telefoon 836-1111

Geregistreerde kantoor
Hoek van Voortrekkerstraat en Rhodeslaan
(Posbus 74) Vereeniging 1930
Telefoon 22-2221

Oordragsekretarisse
Rand Registrars Limited
Devonshire House, Jorissenstraat
Braamfontein, Johannesburg 2001

Verenigde Koninkrykkantoor
Kennedy Tower
St. Chads, Queensway
Birmingham B4 6JF

Verenigde Koninkryk-oordragsekretarisse
Charter Consolidated Limited
Charter House, Park Street
Ashford, Kent T24 8EQ

Bankiers
Die Standard Bank van Suid-Afrika Beperk
Barclays-Nasionale Bank Beperk

Aksepbankiers
Union Acceptances Beperk

Ouditeure
Deloitte & Kie.

Group Managing Director

WG Boustred
WF Spence
Prof PW Hoek
JM Edwards *(British)*
HA Godwin
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M Hall *(Brits)*
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Barclays-Nasionale Bank Beperk

Aksepbankiers
Union Acceptances Beperk

Ouditeure
Deloitte & Kie.

Report of the auditors

To the members of Stewarts & Lloyds of South Africa Limited

We have examined the financial statements set out on pages 8 to 15 and 38 to 51 and, in our opinion, these statements fairly present the financial position of the company and its subsidiaries and the results of their operations in the manner required by the Companies Act, 1973.

We have also examined the statement of group results and financial position adjusted for the effect of inflation set out on pages 52, 54 and 55 which have been prepared in accordance with the methods described in the notes thereto. In our opinion, this statement fairly restates in summarised form the results for the period and the financial position of the group expressed in terms of the general purchasing power of money at 30 September 1977.

Deloitte & Co.
Chartered Accountants (S.A.)
Johannesburg, 24 November 1977

Verslag van die ouditeure

Aan die lede van Stewarts & Lloyds of South Africa Limited

Ons het die finansiële state soos op bladsye 8 tot 15 en 38 tot 51 uiteengesit, nagegaan en, na ons mening, verstrek hierdie state 'n redelike weergawe van die finansiële stand van die maatskappy en sy filiale en die resultate van hulle bedrywighede op die wyse wat deur die Maatskappywet, 1973, vereis word.

Ons het ook die staat van groepresultate en finansiële stand, soos aangesuiwer vir die uitwerking van inflasie, nagegaan. Hierdie aangesuiwerde resultate is op bladsye 52, 54 en 55 uiteengesit en is voorberei ooreenkomstig die metodes in die aantekeninge daartoe omskryf. Na ons mening is dié staat 'n redelike weergawe in opgesomde vorm van die resultate vir die tydperk en die finansiële stand van die groep, uitgedruk kragtens die algemene koopkrag van geld op 30 September 1977.

Deloitte & Kie.
Geoktrooieerde Rekenmeesters (S.A.)
Johannesburg, 24 November 1977

Financial calendar for 1978

The pattern of dividend and interest payments is:	
Ordinary dividend	Announced November Paid January
Preference dividend	Payable in equal instalments at beginning January and July
Unsecured loan stock Interest 7,5% 1977/1984	Payable 30 June and 31 December
Unsecured debenture stock Interest:	
1. 10,25% 1982/1991	Payable 31 March and 30 September
2. 9,2% 1984/1998	
3. Series A and B 1986/1995	
4. Series A 13,375% 1988/1996 and Series B 13,125% 1982/1985	Payable 30 June and 31 December

Finansiële kalender vir 1978

Die patroon van dividend- en rentebetalings is:	
Gewone dividend	Aangekondig November Betaal Januarie
Voorkeurdividend	Betaalbaar in gelyke paaiemente begin Januarie en Julie
Rente op onversekerde leningseffekte 7,5% 1977/1984	Betaalbaar 30 Junie en 31 Desember
Rente op onversekerde obligasies:	
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Report of the directors

Group review

During the year ended September 1977, the group continued to experience the deterioration in economic activity felt in 1976. In several sectors, particularly manufacturing, further shrinkage of demand occurred and lack of volume impaired ability to maintain previous profit levels. Profitability was further reduced by increased costs and competition which resulted in a general reduction in gross margins.

Sales for the year of R206 030 000 were approximately 1% lower than for the previous year. Net income after taxation decreased by 20%, from R10 903 000 to R8 741 000. Earnings per share were 35,1 cents compared with 45,0 cents for 1976.

The directors have decided that the earnings for the year and the inherent strength of the group warrant maintaining the ordinary dividend at 17 cents per share with an ordinary dividend cover of 2,05.

Graph 1 shows the trends in earnings and dividends per share.

Graph 2 illustrates the track records for monetary and real return after tax on opening shareholders' funds.

Inflation accounting

The group has for several years taken the view that the shareholders need information as to the effects of inflation upon the group's assets and operating performance. Accordingly, inflation adjusted profit and return on investment statistics were developed and presented in the annual report to shareholders. This has been done again this year, using a current price index to quantify the adjustments to profits that reflect the supposed consequence of inflation upon stocks, depreciation, borrowings and monetary assets. However, despite lengthy public debate as to alternative methods of making suitable adjustments, no generally accepted method seems to have emerged. In the circumstances the directors have decided to discontinue the exercise for future years.

Details of the inflation adjusted results of operations are shown

Direkteursverslag

Groepsoorsig

Gedurende die jaar geëindig September 1977, het die groep nog steeds die agteruitgang in ekonomiese bedrywighede wat in 1976 ondervind is, beleef. In verskeie sektore, veral op die gebied van vervaardiging, was daar 'n verdere afname in vraag en die gebrek aan volume het die vermoë om vorige winspeile te handhaaf, gekortwiek. Winsgewendheid is verder verminder deur verhoogde koste en mededinging wat 'n algemene vermindering in bruto marges tot gevolg gehad het.

Verkope vir die jaar van R206 030 000 was ongeveer 1% laer as vir die vorige jaar. Netto inkomste na belasting het met 20% verminder, van R10 903 000 tot R8 741 000. Verdienste per aandeel was 35,1 sent, vergeleke met 45,0 sent vir 1976.

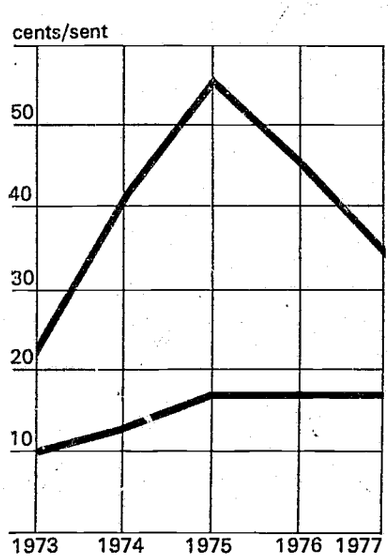
Die direkteure het besluit dat die verdienste vir die jaar en die inherente sterkte van die groep die handhawing van die gewone dividend teen 17 sent per aandeel met 'n gewone dividenddekking van 2,05 regverdig.

Grafiek 1 toon die tendens van verdienste en dividende per aandeel.

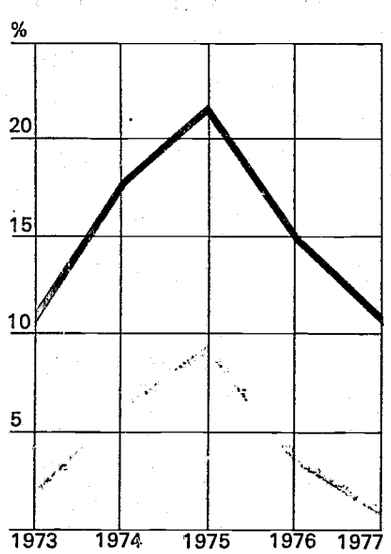
Grafiek 2 illustreer die baanrekords vir monetêre en reële rendement na belasting op openingsaandeelhouersfondse.

Inflasierekeningkunde

Vir etlike jare al is die groep van mening dat die aandeelhouers inligting vereis omtrent die uitwerking van inflasie op die groep se bates en bedryfsprestasie. Gevolglik is statistieke in verband met wins en rendement op belegging wat vir inflasie aangesuiwer is, onthul en in die jaarverslag aan aandeelhouers aangebied. Hierdie metode is weer eens vanjaar toegepas en hiermee is 'n indeks van hersiene pryse gebruik om die hoeveelheid aansuiwerings tot winste wat die vermoede gevolg van inflasie op voorraad, waardevermindering, lenings en monetêre bates weerspieël, te bepaal. Ten spyte van langdurige algemene beraadslaging oor alternatiewe metodes om toepaslike aansuiwerings te maak, het geen algemeen aanvaarbare metode blykbaar hieruit voortgekom nie. In die omstandighede het die direkteure besluit om in die toekoms



Graph 1
Group earnings and dividends per share
Grafiek 1
Groepverdienste en dividende per aandeel



Graph 2
Monetary and real return on shareholders' funds
Grafiek 2
Monetêre en reële rendement op aandeelhouers-fondse

In several sectors, particularly manufacturing, further shrinkage of demand occurred and lack of volume impaired ability to maintain previous profit levels. Profitability was further reduced by increased costs and competition which resulted in a general reduction in gross margins.

Sales for the year of R206 030 000 were approximately 1% lower than for the previous year. Net income after taxation decreased by 20%, from R10 903 000 to R8 741 000. Earnings per share were 35,1 cents compared with 45,0 cents for 1976.

The directors have decided that the earnings for the year and the inherent strength of the group warrant maintaining the ordinary dividend at 17 cents per share with an ordinary dividend cover of 2,05.

Graph 1 shows the trends in earnings and dividends per share.

Graph 2 illustrates the track records for monetary and real return after tax on opening shareholders' funds.

Inflation accounting

The group has for several years taken the view that the shareholders need information as to the effects of inflation upon the group's assets and operating performance. Accordingly, inflation adjusted profit and return on investment statistics were developed and presented in the annual report to shareholders. This has been done again this year, using a current price index to quantify the adjustments to profits that reflect the supposed consequence of inflation upon stocks, depreciation, borrowings and monetary assets. However, despite lengthy public debate as to alternative methods of making suitable adjustments, no generally accepted method seems to have emerged. In the circumstances the directors have decided to discontinue the exercise for future years.

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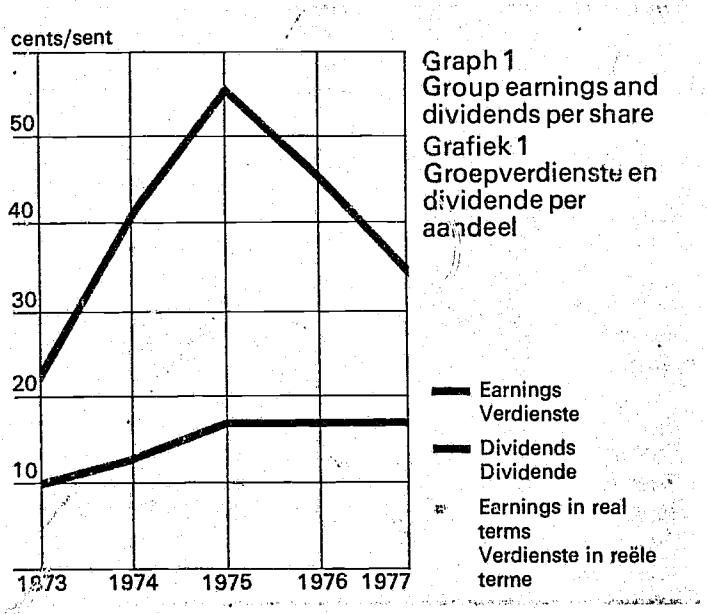

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Grafiek 1
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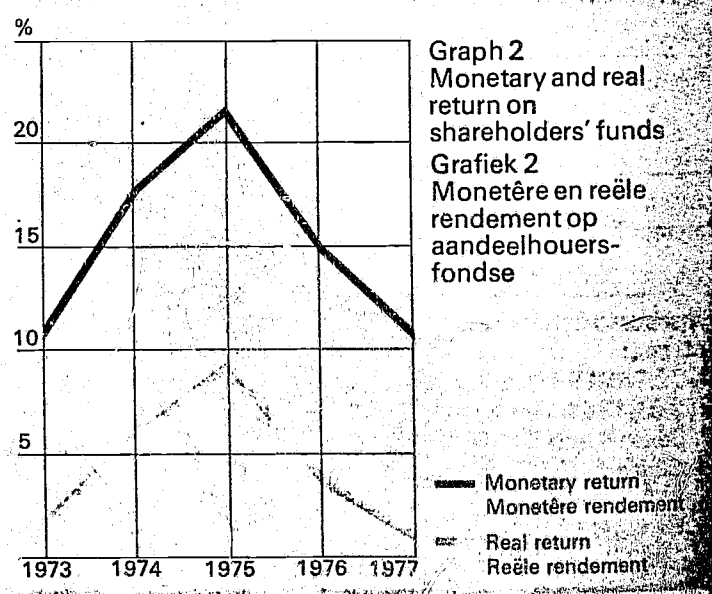


Graph 2
Monetary and real return on shareholders' funds
Grafiek 2
Monetêre en reële rendement op aandeelhouers-fondse

in this report on Pages 52 to 55. Comparisons of profit and return, historical and adjusted, are shown in Graphs 1 and 2.

hierdie gebruik te laat vaar.
Besonderhede van die inflasie-aangesuiwerde resultate van bedrywighede word in hierdie verslag op bladsye 52 tot 55 verstrek. Vergelykings van wins en rendement, histories en aangesuiwer, word in Grafiek 1 en 2 getoon.

Analysis of added value

Receipts from the sale of products and services were allocated as indicated in the analysis given below.

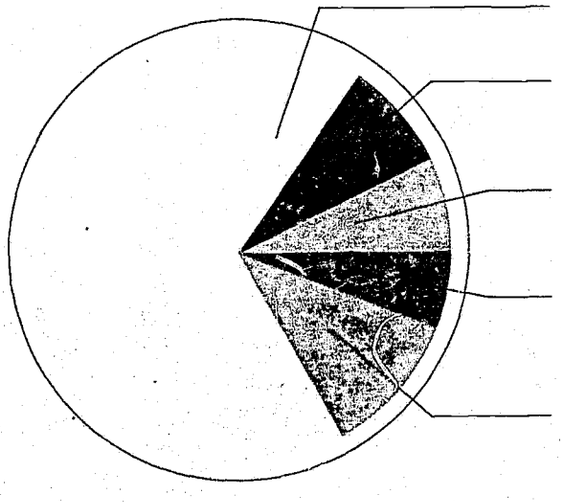
Die ontleding van toegevoegde waarde

Ontvangste uit die verkoop van produkte en uit dienste is soos volg ingedeel in die ontleding hieronder:

	1977	%	1976	%	
	R000		R000		Ontvangste uit die verkoop van produkte, nie-bedryfsbates en ander
Receipts from the sale of products, non-trading assets and other sources	207 739	100,00	208 040	100,00	bronne:
Charges:					Onkoste:
Raw materials, manufactured goods, fuel and power	123 064	59,24	119 450	57,42	Grondstowwe, vervaardigde goedere, brandstof en krag
Distribution and general expenses	19 834	9,55	19 936	9,58	Verspreidings- en algemene koste
Delivery charges	1 967	0,95	2 024	0,97	Afleweringskoste
Added value	62 874	30,26	66 630	32,03	**Toegevoegde waarde**
Distributed as follows:					Soos volg ingedeel:
Wages, salaries and fringe benefits	42 828	20,62	44 010	21,15	Lone, salarisse en byvoordele
Taxation on income for the year	5 162	2,48	7 191	3,46	Belasting op inkomste vir die jaar
Interest on borrowings	3 708	1,78	2 387	1,15	Rente op lenings
Shareholders' ordinary dividends	3 874	1,86	3 827	1,84	Aandeelhouers se gewone dividende
Shareholders' preference dividends	36	0,02	36	0,02	Aandeelhouers se voorkeurdividende
Dividends paid to outside shareholders ex subsidiary companies	560	0,27	428	0,20	Dividende aan buite-aandeelhouers van filiaalmaatskappye betaal
Depreciation	2 435	1,17	2 139	1,03	Waardevermindering
Income retained	4 271	2,06	6 612	3,18	Inkomste behou

Distribution of added value

Indeling van toegevoegde waarde



Employees received 68,1%
Werknemers het 68,1% ontvang

Receiver of Revenue received 8,2%
Ontvanger van Inkomste het 8,2% ontvang

Dividends paid 7,1%
Dividende betaal 7,1%

Interest on borrowed monies 5,9%
Rente op geleende geld 5,9%

10,7% was retained to finance replacements and growth
10,7% is behou om vervangings en groei te finansier

Nature of business

The business of the Stewarts & Lloyds Group comprises the manufacture and distribution of welded and seamless steel tube, rectangular hollow sections, tubular steel structures, pipe fittings and joints, copper, plastic and Bundyweld tubes, centrifugal pumps, valves and sluice gates, diesel engines, irrigation equipment, malleable and grey iron castings, the processing and merchanting of mild and alloy steel and the manufacture of air conditioning and refrigeration components and parts, mining machinery and ventilation equipment.

Holding company's interest in results of subsidiaries

The holding company's interest in the results of subsidiaries was as follows:

	1977	1976
Subsidiaries		
Aggregate profits after tax	**8 203 000**	9 238 000
Aggregate losses after tax	**65 000**	173 000

Commentaries on divisional operations are given elsewhere in this report.

Capital expenditure

Following strategic studies undertaken to determine future capital requirements of the group, a phased capital expenditure programme of R32 million for plant replacements and modifications has been initiated.

During the present year expenditure amounted to R3 716 000 (1976 R3 334 000) and contractual commitments were established for an additional R6 126 000 (1976 R303 000).

Aard van besigheid

Die besigheid van die Stewarts & Lloyds-groep behels die vervaardiging en verspreiding van gesweiste en naatlose staalpype, reghoekige holprofiele, staalpypstrukture, pyptoebehore en -lasse, koper-, plastiek- en Bundyweldpype, sentrifugale pompe, kleppe en sluishekke, dieselenjins, besproeiingstoerusting, smeebaar yster- en grysyster-gietstukke, die verwerking en verhandeling van week- en legeerstaal en die vervaardiging van samestellende dele en onderdele vir lugversorging en verkoeling, mynmasjinerie en ventilasietoerusting.

Houermaatskappy se belang in resultate van filiale

Die houermaatskappy se belang in die resultate van filiale was soos volg:

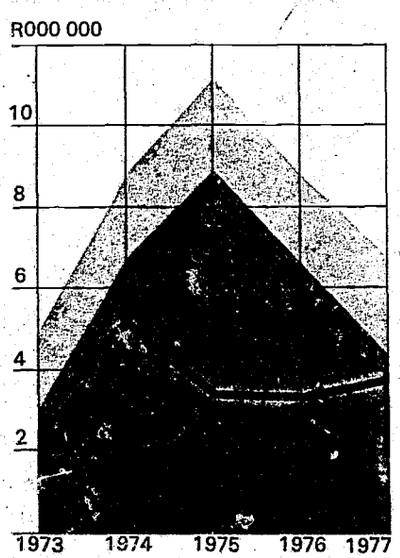
	1977	1976
Filiale		
Totale winste na belasting	**8 203 000**	9 238 000
Totale verliese na belasting	**65 000**	173 000

Kommentaar oor afdelingsbedrywighede word elders in hierdie verslag gelewer.

Kapitaalbesteding

Nadat strategiese studies onderneem is om die toekomstige kapitaalbehoeftes van die groep te bepaal, is 'n trapsgewyse kapitaalbestedingsprogram van R32-miljoen ingestel vir aanlegvervangings en -modifikasies.

Gedurende die lopende jaar het besteding te staan gekom op R3 716 000 (1976: R3 334 000) en kontraktuele verpligtinge is aangegaan vir 'n bykomende bedrag van R6 126 000 (1976: R303 000).



Graph 3
Expenditure on fixed assets versus income retained and depreciation

Grafiek 3
Besteding aan vaste bates teenoor behoue inkomste en waardevermindering

1 The Wadeville works of Alers Hankey (Expanded Metal) (P Ltd, one of four Alers Hankey companies acquired by the gro during the year.

2 Condenser manufacture in the Pretoria plant of Koolmast Manufacturing (Pty) Ltd is a high precision operation.

1 Die Wadeville-fabriek van Alers Hankey (Expanded Metal (Pty) Ltd, een van die vier Alers Hankey-maatskappye wat gedurende die jaar deur die groep verkry is.

2 Die vervaardiging van kondensators in die Pretoria-aanle van Koolmaster Manufacturing (Pty) Ltd is hoëpresisiewer

rekenmeester, P Munton Jackson, besturende direkteur van

The future

Uncertain economic and political conditions which exist in Southern Africa and indeed throughout the world, make the forecasting of future prospects difficult. In addition, the effect of political action, both local and overseas, remains unpredictable. It is unlikely that any significant improvement in general business conditions will be experienced over the next twelve months.

In the long term we are confident that prospects remain sound and every effort is being made now to ensure that when conditions improve the group will be ready to take advantage of the economic upturn.

The group's Rhodesian operations have once again made a valuable contribution to overall results despite abnormal conditions. It is not possible to forecast the future performance of these operations as much will depend on the sort of settlement ultimately reached.

In the circumstances your directors are of the opinion that it would be unwise to predict an earnings trend for the current year.

Holding company

The company is a subsidiary of International Pipe and Steel Investments South Africa (Pty) Limited (IPSA), which holds 52% of the company's ordinary shares.

Major shareholders

Other major shareholders are The British Steel Corporation of South Africa (Pty) Limited (21%) and Anglo American Corporation of South Africa Limited (11%).

Die toekoms

Weens die onbestendige ekonomiese en politieke toestande wat in Suid-Afrika en trouens deur die hele wêreld heers, is dit moeilik om die vooruitsigte vir die toekoms te voorspel. Boonop bly die uitwerking van politieke optrede, binnelands sowel as buitelands, onvoorspelbaar. Dit is onwaarskynlik dat enige wesenlike verbetering in algemene besigheidstoestande gedurende die volgende twaalf maande sal plaasvind.

Ons is egter vol vertroue dat vooruitsigte oor die langtermyn goed bly en alle pogings word nou aangewend om te verseker dat die groep oorgehaal sal wees om voordeel te trek uit die ekonomiese oplewing sodra toestande verbeter.

Die groep se Rhodesiese bedrywighede het weer eens 'n waardevolle bydrae tot die globale resultate gelewer, ondanks abnormale toestande. Dit is nie moontlik om die toekomstige prestasie van hierdie bedrywighede te voorspel nie, aangesien baie afhang van die soort skikking wat uiteindelik bereik sal word.

In die omstandighede is u direkteure van mening dat dit onverstandig sou wees om die verloop van verdienste vir die huidige jaar te voorspel.

Houermaatskappy

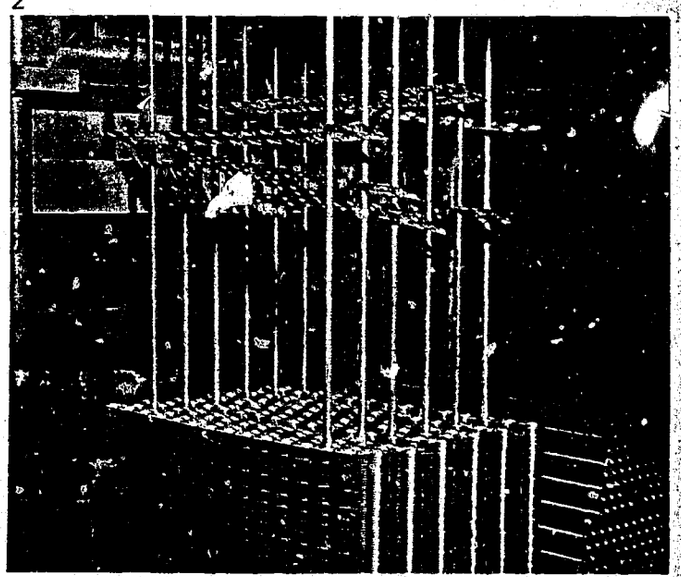
Die maatskappy is 'n filiaal van International Pipe and Steel Investments South Africa (Pty) Limited (IPSA) wat 52% van die maatskappy se gewone aandele besit.

Hoofaandeelhouers

Ander hoofaandeelhouers is The British Steel Corporation of South Africa (Pty) Limited (21%) en Anglo American Corporation of South Africa Limited (11%).

1

2



Personnel

Group manning at 30 September 1977 was 9 848 compared with 10 199 at 30 September 1976. The lower level of manning is attributable in the main to reduced activity in the manufacturing operations of the group.
During the year greater emphasis was placed on the observance of health and safety regulations with gratifying results. The group is conscious of the need to provide opportunities for Black, Coloured and Asiatic employees to develop their full potential and considerable progress was made during the year towards this objective.

Share capital

1. Ordinary

1.1 Authorised: There has been no change in the authorised ordinary share capital, which remains at R15 000 000 divided into 30 000 000 shares of 50 cents each.
1.2 Issued: During the year 280 000 ordinary shares of 50 cents each were allotted and issued under the company's share incentive scheme at a premium of 110 cents per share. The issued ordinary share capital at 30 September 1977 was R11 395 266 (1976: R11 255 266) divided into 22 790 533 shares of 50 cents each.

2. Preference

The authorised and issued preference share capital remains unchanged.

The Companies Act, 1973 (as amended) provides that any unissued share capital under the control of the directors ceases to be so classified at the date of the annual general meeting. Shareholders will be asked to place any shares unissued on the date of the annual general meeting, to be held on 24 February 1978, under the control of directors until the next annual general meeting.

Acquisition

On 1 June 1977 the company acquired the entire issued share capitals of H Alers Hankey (Cape) (Pty) Limited; H Alers Hankey (Natal) (Pty) Limited; Alers Hankey (Expanded Metal) (Pty) Limited and The Steel Service Centre of South Africa (Pty) Limited (name since changed to Baldwins-Hankey (Pty) Limited), for R4 250 000 paid in cash. The acquisition has not materially affected the net asset value of the company nor the earnings per share for the year ended 30 September 1977.

Disposal

During the year Anderson Hardware (Pty) Limited was sold.

Dividends

A dividend of 17 cents (1976: 17 cents) per share was declared on 24 November 1977 in respect of the year ended 30 September 1977. Dividend warrants will be posted to ordinary shareholders on or about 5 January 1978. The preference dividend on the 6% preference shares amounts to R36 000 (1976: R36 000) and is paid in equal instalments at the beginning of January and July.

Personeel

Groepwerknemers op 30 September 1977 was 9 848 vergeleke met 10 100 op 30 September 1976. Die laer getal werknemers is hoofsaaklik toeskryfbaar aan verminderde bedrywigheid in die vervaardigingswerksaamhede van die groep.
Gedurende die jaar is groter klem op die nakoming van gesondheids- en veiligheidsmaatreëls gelê en die resultate hiervan was bemoedigend.

Die groep besef dat dit noodsaaklik is om geleenthede aan Swart, Kleurling- en Asiatiese werknemers te bied om hulle volle potensiaal te ontwikkel en aansienlike vordering is gedurende die jaar gemaak tot verwesenliking van hierdie doel.

Aandelekapitaal

1. Gewone

1.1 Gemagtig: Daar was geen verandering in die gemagtigde gewone aandelekapitaal nie wat bly op R15 000 000, verdeel in 30 000 000 aandele van 50 sent elk.
1.2 Uitgereik: Gedurende die jaar is 280 000 gewone aandele van 50 sent elk onder die maatskappy se aandeelaansporingskema teen 'n premie van 110 sent per aandeel toegeken en uitgereik. Die uitgereikte gewone aandelekapitaal op 30 September 1977 was R11 395 266 (1976: R11 255 266) verdeel in 22 790 533 aandele van 50 sent elk.

2. Voorkeur

Die gemagtigde en uitgereikte voorkeuraandelekapitaal bly onveranderd.

Die Maatskappywet 1973 (soos gewysig) bepaal dat enige onuitgereikte aandelekapitaal onder beheer van die direkteure nie meer as sodanig geld nie op die datum van die algemene jaarvergadering. Aandeelhouers sal gevra word om enige aandele wat onuitgereik is op die datum van die algemene jaarvergadering, wat vir 24 Februarie 1978 belê is, tot die volgende algemene jaarvergadering onder beheer van die direkteure te plaas.

Verkryging

Op 1 Junie 1977 het die maatskappy die totale uitgereikte aandelekapitaal van H Alers Hankey (Cape) (Pty) Limited, H Alers Hankey (Natal) (Pty) Limited; Alers Hankey (Expanded Metal) (Pty) Limited en The Steel Service Centre of South Africa (Pty) Limited (naam sedertdien verander in Baldwins-Hankey (Pty) Limited) vir R4 250 000, in kontant betaal, verkry. Die verkryging het nie 'n wesenlike uitwerking gehad op die netto batewaarde van die maatskappy of die verdienste per aandeel vir die jaar geëindig 30 September 1977 nie.

Verkoop

Anderson Hardware (Pty) Limited is gedurende die jaar verkoop.

Dividende

'n Dividend van 17 sent (1976: 17 sent) per aandeel is op 24 November 1977 ten opsigte van die jaar geëindig 30 September 1977 verklaar. Dividendbewyse sal teen 5 Januarie 1978 aan gewone aandeelhouers gepos word. Die

Subsidiary companies

Statutory information in respect of subsidiary companies in the group is set out on Pages 50 and 51 of this report.

New company:

A new subsidiary, Salister Diesels (Pty) Limited was registered on 17 May 1977, to acquire the assets of the Stewarts & Lloyds Lister Engine Division. The company holds 65% of the share capital and RA Lister & Co Limited of Dursley, England, 35%.

Special resolutions were passed by subsidiaries during the year to:

1. Amend the Articles of Association of—
JH Vivian Holdings (Pty) Limited
Baldwins (Alloy Steels) (Pty) Limited
Vivian-Colt (Pty) Limited
Weiser Lock Company (South Africa) (Pty) Limited
JK Fulton (Pty) Limited
Vosa Valves (Pty) Limited
Koolmaster Manufacturing (Pty) Limited
Jet Air Curtains South Africa (Pty) Limited

2. Change the name of—
JH Vivian Mining Company (Pty) Limited to Salchain (Pty) Limited
Enterprise Engineering (Pty) Limited to Salsa Properties (Boksburg) (Pty) Limited
The Steel Service Centre of South Africa (Pty) Limited to Baldwins-Hankey (Pty) Limited.

3. Increase the authorised ordinary share capital of Koolmaster Manufacturing (Pty) Limited by R749 800 to R750 000.

Directorate

On 29 April 1977 Mr EP Gush resigned and his alternate, Mr MW King, was appointed in his place. Mr AW Lea was nominated as alternate to Mr MW King.

Mr RR Johnson resigned from the Board on 27 May 1977.

Mr ME Llowarch previously an alternate director to Mr JM Edwards was appointed a director on 26 August 1977 in place of Mr JA Wood, who resigned on the same date. Mr M Hall was nominated as Mr ME Llowarch's alternate.

Mr HR Smith resigned as a director on 30 September 1977.

In terms of the company's articles of association, Messrs HC Kuiper, JM Edwards, WF Spence, MW King and ME Llowarch retire at the next annual general meeting. All are eligible and available for re-election.

Details regarding the directors in office at 30 September 1977 and the secretary are shown on Page 6 of this report.

Directors' interests

At 30 September 1977 the interests of the directors in the share capital of the company were as follows:

	1977	1976
Beneficial	186 200	6 600
Non-beneficial	6 400	7 200

The increase in beneficial holdings is due to the allotment and issue of ordinary shares in terms of the Share Incentive

voorkeurdividend op die 6%-voorkeuraandele bedra R36 000 (1976: R36 000) en word begin Januarie en Julie in gelyke paaiemente betaal.

Filiaalmaatskappye

Statutêre inligting ten opsigte van filiaalmaatskappye in die groep word op bladsye 50 en 51 van hierdie verslag uiteengesit.

Nuwe maatskappy:

'n Nuwe filiaal, Salister Diesels (Pty) Limited is op 17 Mei 1977 geregistreer om die bates van die Lister-enjinafdeling van Stewarts & Lloyds te verkry. Die maatskappy besit 65% van die aandelekapitaal en RA Lister & Co Limited van Dursley, Engeland, 35%.

Spesiale besluite is gedurende die jaar deur filiale geneem om:

1. Die Statute van Oprigting te wysig van—
JH Vivian Holdings (Pty) Limited
Baldwins (Alloy Steels) (Pty) Limited
Vivian-Colt (Pty) Limited
Weiser Lock Company (South Africa) (Pty) Limited
JK Fulton (Pty) Limited
Vosa Valves (Pty) Limited
Koolmaster Manufacturing (Pty) Limited
Jet Air Curtains South Africa (Pty) Limited

2. Die naam te verander van—
JH Vivian Mining Company (Pty) Limited in Salchain (Pty) Limited
Enterprise Engineering (Pty) Limited in Salsa Properties (Boksburg) (Pty) Limited
The Steel Service Centre of South Africa (Pty) Limited in Baldwins-Hankey (Pty) Limited

3. Die gemagtigde gewone aandelekapitaal van Koolmaster Manufacturing (Pty) Limited met R749 800 tot R750 000 te vermeerder.

Direksie

Op 29 April 1977 het mnr EP Gush bedank en sy plaasvervanger, mnr MW King, is in sy plek aangestel, mnr AW Lea is a plaasvervanger vir mnr MW King genomineer

Mnr RR Johnson het op 27 Mei 1977 uit die direksie bedank.

Mnr ME Llowarch, voorheen 'n plaasvervangende direkteur vir mnr JM Edwards, is op 26 Augustus 1977 aangestel in die plek van mnr JA Wood wat op vermelde datum bedank het. Mnr M Hall is as mnr ME Llowarch se plaasvervanger genomineer.

Mnr HR Smith het op 30 September 1977 as direkteur bedank.

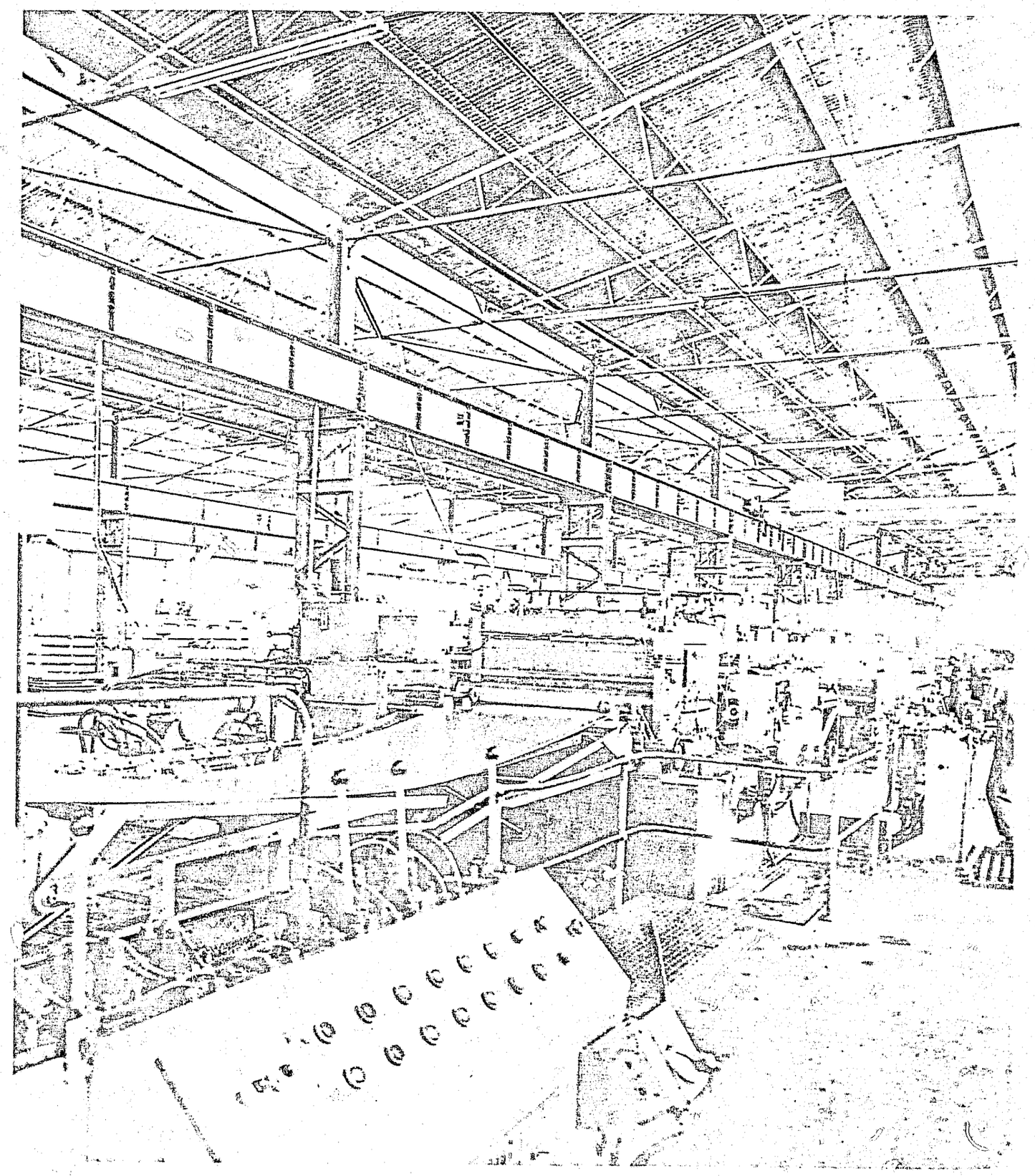
Ingevolge die maatskappy se statute van oprigting tree mnre HC Kuiper, JM Edwards, WF Spence, MW King en ME Llowarch by die volgende algemene jaarvergadering uit. Hulle is almal benoembaar en beskikbaar vir herkiesing.

Besonderhede omtrent die direkteure aan bewind op 30 September 1977 asook die sekretaris word op bladsy 6 van hierdie verslag verstrek.

Direkteure se belange

Op 30 September 1977 was die belange van die direkteure in

The cut-to-length line of the Baldwins-Hankey operation.
Die sny-tot-lengte-lyn van die Baldwins-Haekey-bedrywigheid



Scheme. There has been no change since the end of the financial year.

Directors' fees

It will be necessary to approve the fees payable to directors for the year ended 30 September 1977. An amount of R52 700 (1976: R50 680) has been provided in the accounts.

Share incentive scheme

At a general meeting of shareholders held on 27 February 1976, a share incentive scheme was approved and 1 125 000 ordinary shares were made available to the directors for issue to the Trustees of the scheme, who would offer the shares for sale in accordance with the terms and conditions of the scheme.

Number of ordinary shares available as scheme shares	1 125 000
Scheme shares issued during the year	280 000
Balance unissued at 30 September 1977	845 000

The foregoing report of the directors, together with the annual financial statements for the year ended 30 September 1977 were approved by the board of directors on 24 November 1977 and are signed on its behalf by:

HC Kuiper, *Chairman*
Voorsitter

TM King, *Deputy Chairman and Group Managing Director*
Adjunk-voorsitter en Groep-Besturende Direkteur

EA Johnson, *Group Secretary*
Groepsekretaris

die aandelekapitaal van die maatskappy soos volg:

	1977	1976
Voordelig	186 200	6 600
Nie-voordelig	6 400	7 200

Die vermeerdering in voordelige aandelebesit is vanweë die toekenning en uitreiking van gewone aandele ingevolge die Aandeelaansporingskema. Daar was geen verandering sedert die boekjaareinde nie.

Direkteursgelde

Dit sal nodig wees om die gelde wat vir die jaar geëindig 30 September 1977 aan direkteure betaalbaar is, goed te keur. 'n Bedrag van R52 700 (1976: R50 680) is in die rekeninge voorsien.

Aandeelaansporingskerna

By 'n algemene vergadering van aandeelhouers op 27 Februarie 1976 gehou, is 'n aandeelaansporingskema goedgekeur en 1 125 000 gewone aandele is aan die direkteure beskikbaar gestel vir uitreiking aan die Trustees van die skema wat die aandele te koop sou aanbied kragtens die bepalinge en voorwaardes van die skema.

Getal gewone aandele as skema-aandele beskikbaar	1 125 000
Skema-aandele gedurende die jaar uitgereik	280 000
Saldo op 30 September 1977 onuitgereik	845 000

Die voorafgaande direkteursverslag, tesame met die finansiële jaarstate vir die jaar geëindig 30 September 1977 is op 24 November 1977 deur die direksie goedgekeur en namens die raad onderteken deur:

Corporate staff operation

HC Kuiper
Chairman
Voorsitter

TM King
Deputy chairman and
group managing director
Adjunk-voorsitter en
besturende direkteur
van die groep.

A small staff of specialists has the function of advising the group managing director on policy matters and assisting the executive directors of the four divisions of the group on the implementation of these policies within their divisions.

The role of the group secretary, EA Johnson, is the traditional one of providing secretarial and legal services as and when required by group operations and of keeping in close touch with The Johannesburg Stock Exchange and maintaining a flow of information, including dividend and other announcements to the group's 3 000 shareholders.

1 Managers R Jennions, operations research, CT Lowings, management services, BL Carrasco, corporate strategy and planning, and DNJ Price, corporate accounting.

Personeelbedrywigheid in die maatskappy

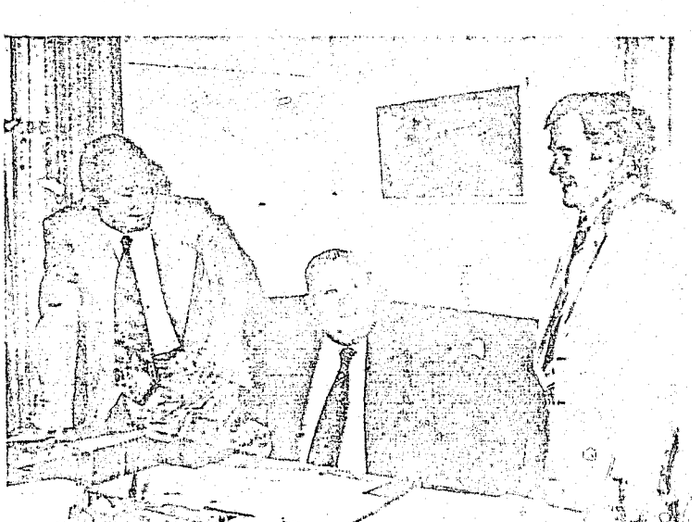
EA Johnson
Group secretary
Groepsekretaris.

Onder die personeel is daar 'n groepie spesialiste wat die besturende direkteur van die groep adviseer ten opsigte van beleidsaangeleenthede en die besturende direkteure van die vier afdelings van die groep bystaan met die implementering van hierdie beleidsrigtings binne hulle afdelings.

EA Johnson vervul die tradisionele rol van groepsekretaris, naamlik om sekretariële en regsdienste te verskaf, soos en wanneer dit deur groepsbedrywighede vereis word en om in aanraking te bly met Die Johannesburgse Effektebeurs en oor gereelde inligting te beskik, met inbegrip van dividend- en ander aankondigings aan die groep se 3 000 aandeelhouers.

2 KH Buhr, manager group industrial relations, BH McIntosh, manager group personnel administration services, MW Rushton, manager training and development.

2 KH Buhr, bestuurder industriële betrekkinge in die groep, BH McIntosh, bestuurder groepspersoneel-administrasiedienste, MW Rushton, bestuurder opleiding en ontwikkeling.



PH Levick

LF Franzsen

The group marketing manager, PH Levick, is responsible for the collation and distribution of market intelligence. He advises individual company marketing managers on marketing strategies and ensures a co-ordinated approach by all group operations to the marketing of their products in both the domestic and foreign markets.

The export manager, LF Franzsen, reports to the group marketing manager and is specifically responsible for the day-to-day operations of the group's export activities.

Die groep se bemarkingsbestuurder, PH Levick, is verantwoordelik vir die samestelling en verspreiding van markinligting. Hy gee die betrokke bemarkingsbestuurders van die maatskappy raad omtrent afsetstrategie en verseker dat daar 'n gekoördineerde benadering deur alle groepsbedrywighede is ten opsigte van die bemarking van hulle produkte in die binnelandse sowel as buitelandse markte.

Die uitvoerbestuurder, LF Franzsen doen verslag aan die groep se bemarkingsbestuurder en is spesifiek verantwoordelik vir die daaglikse werksaamhede van die groep se uitvoerbedrywighede.

RT Anderson

The group financial controller, RT Anderson, is responsible for the overall financial policy within the group. Responsible to him are managers in charge of corporate strategy and planning, corporate accounting, management services and operations research.

Die groep se finansiële kontroleur, RT Anderson is verantwoordelik vir die algemene finansiële beleid binne die groep. Die bestuurders in beheer van die maatskappy se vooruitbeplanning en strategie, maatskappyrekeningkunde, bestuursdienste en bedryfsnavorsing is weer regstreeks aan hom verantwoordelik.

TP Both.

All divisions in the group have their own personnel manager, but overall personnel policy stems from the group's personnel manager, TP Botha, who is also responsible for providing training facilities and administering the group's pension and medical aid funds and home ownership schemes.

Alle afdelings in die groep het hulle eie personeelbestuurder, maar die algemene personeelbeleid word neergelê deur die groep se personeelbestuurder TP Botha wat ook verantwoordelik is vir die voorsiening van opleidingsfasiliteite en die administrasie van die groep se pensioen- en mediese

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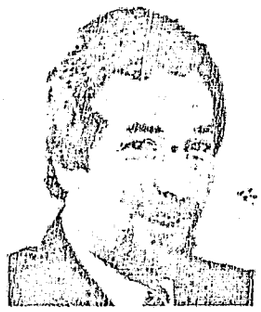
RE Corcoran
Marketing manager
Bemarkingsbestuurder

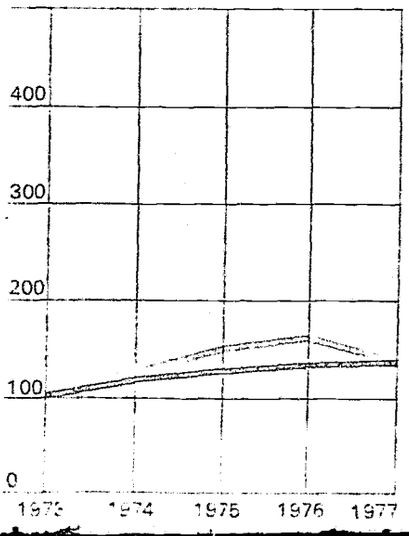


M Peyremorte
Planning manager
Beplanningsbestuurder

Handelsafdeling

Oor die algemeen was die Handelsafdeling se verkope effens benede verwagting en het 'n werklike agteruitgang in prestasie getoon vergeleke met die vorige jaar. Daar was 'n verskil in prestasie tussen die verskillende gebiede en maatskappye waaruit die afdeling bestaan, terwyl die sentrale gebied reële groei behaal het en die Rhodesiese bedrywigheid 'n lofwaardige prestasie gelewer het.

Vir Stewarts & Lloyds-takke het die eerste helfte van die jaar florerend geblyk, maar die tweede helfte het meer met verwagtinge gestrook. Daar was volgehoue bedrywigheid op die mynboumark en in sommige belangrike projek-ontwikkelinge, maar vervaardigende nywerheid was traag, veral in die Kaap en Natal.



Relative movement of sales and income from a common base of 100 in 1973

Betreklike wisseling van afset en inkomste vanaf 'n gemeenskaplike basis van 100 in 1973

Die prestasie van die nuwe depot by Boksburg wat bedoel is om die Oos-Rand te dien, het alle verwagtinge oorskry.

Baldwins se besigheid het goed daarin geslaag om kop bo water te hou, alhoewel afnemende besteding aan duursame verbruiksgoedere soos motors en yskaste 'n stadiger groei van staalplaatverkope tot gevolg gehad het as wat daar in die vooruitsig gestel is. Verkope van struktuurstaal is nadelig getref deur verlaagde peile van besteding aan vaste beleggings.

Vier filiaalmaatskappye van H Alers Hankey, wat gedurende die jaar deur die groep aangekoop is, is aanvullend by die Baldwins-bedrywigheid, in besonder die Steel Service Centre of SA (Pty) Limited by Vanderbijlpark. Hierdie fasiliteit bestaan uit drie sny-tot-lengte en twee splitslyne. Die maatskappy is nou met Baldwins se afwikkelfasiliteit onder die naam Baldwins-Hankey (Pty) Limited gekombineer en bied die grootste verskeidenheid van staalplaatverwerking in die land.

Die verkryging van H Alers Hankey (Cape) (Pty) Limited het aanleiding gegee tot 'n herwaardering van die afdeling se eiendomsbehoeftes in Kaapstad, waar planne ver gevorderd is vir 'n uitbreiding om Stewarts & Lloyds, Baldwins en Vivians te behuis. 'n Soortgelyke oorsig sal in Durban nodig wees sedert die verkryging van H Alers Hankey (Natal) (Pty) Limited.

Die vierde van die maatskappye, Alers Hankey (Expanded Metal) (Pty) Limited by Wadeville, vervaardig staalmaasdraad, vlekvrystaal en aluminium sowel as roosterplaat vir gebruik op looplyste en tussenvloere. Hierdie maatskappy is nou oorgedra na die Afdeling Vervaardigde Produkte.

Baldwins (Alloy Steels) (Pty) Limited by Brakpan het sy uitbreidingsprogram van R170 000 voltooi, wat die installasie van etlike moderne oonde ingesluit het. Hierdie maatskappy dring op bemoedigende wyse die hittebehandelingsmark binne.

Saunders Valves wat met transmissietoerusting die besigheid van JH Vivian & Co Limited uitmaak, het 'n suksesvolle jaar gehad ondanks die toenemende prysmededinging wat veroorsaak is deur die oorvloedige [illegible]

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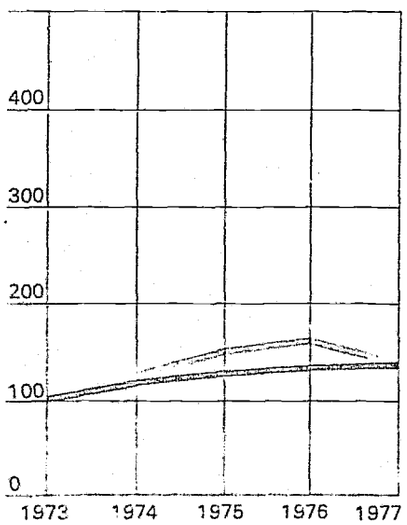

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Rainbird pop-up sprinklers, supplied by Stewarts & Lloyds, Johannesburg branch, in use on the Houghton Golf Club course.

Rainbird-opskietsprinkelaars, verskaf deur Stewarts & Lloyds, Johannesburg-tak, in gebruik op Houghton-gholfklubbaan.

company to continue in its existing form in the light of economic conditions in the area.

The division's operations in South West Africa have reflected some of the political uncertainty prevailing in the territory, but there is little doubt that the projected State of Namibia, when it comes into being, will offer tremendous opportunities. Plans are in hand to capitalise on these as they emerge.

Political uncertainties also faced the Rhodesian operations which nevertheless performed well and profitably despite adverse factors. Continued mining development has contributed to the performance of the Stewarts & Lloyds branches, whilst Baldwins have been adversely affected by the fall in building activity. Despite this fall, Vivian and Watson have continued to thrive by concentrating on other parts of their business, and by demonstrating a commendable ability to participate in most of the large projects now in progress.

In Malawi, a Stewarts & Lloyds sales office has been opened in Lilongwe, to supplement the long established branch at Blantyre. The objective was to move nearer to many existing customers in the area and to take advantage of Malawi Government plans to develop agriculture in the northern provinces of the country. The creditable performance of the Malawi company has been achieved despite the difficulties of supply which have added greatly to the burdens of this small but enthusiastic management team.

The Trading Division, operating as it does from the Cape to Malawi, from Durban to the Atlantic coast of South West Africa, shows wide variations in trading conditions and marketing patterns, on which generalisation is impossible.

verbonde, is nog steeds onbetwis. Die meeste van die kleppe wat in die mark gelewer word, word vervaardig deur Vivian-Saunders van Steeldale waarin die groep 'n finansiële belang het, terwyl die meer gesofistikeerde reeks wat in kleiner mate verskaf word, uit die V.K afkomstig is.

Op die gebied van transmissie, is 'n glanspunt van die jaar die verkryging van die agentskap vir die modulêre stelsel van Opperman-ratkaste.

H Incledon & Co (South Africa) Limited, leweransiers van sanitêre ware en loodgietersvoorraaddele en pypwerk-gereedskap vir die konstruksienywerheid, is getref deur die ernstige afname in boubedrywigheid. Oortollige kapasiteit en die gevolglike prysmededinging sal waarskynlik 'n geruime tyd voortduur, maar die maatskappy het 'n aggressiewe houding aangeneem ten einde te verseker dat hy sy mark-aandeel behou.

Salvalve (Pty) Limited wat in die vorige boekjaar gestig is om die bemarking van alle kleppe met uitsondering van Saunders, te behartig, behaal nog steeds sukses. Die grootste gedeelte van sy bedrywigheid is tans tot die Witwatersrandkompleks beperk, terwyl die mark in ander gebiede deur Stewarts & Lloyds-takke voorsien word.

In Port Elizabeth is die kleinhandelsafsetpunt van Anderson Hardware (Pty) Limited aan 'n ander handelaar op dieselfde gebied verkoop, nadat 'n besluit geneem is dat die voortbestaan van die maatskappy in sy huidige vorm, in die lig van ekonomiese toestande in die gebied, nie winsgewend was nie.

Die afdeling se bedrywighede in Suidwes-Afrika het 'n mate van die heersende politieke onbestendigheid in die gebied weerspieël, maar dit ly geen twyfel nie dat die beplande Staat van Namibia geweldige geleenthede sal bied sodra hy tot stand kom. Planne word beraam om hierdie geleenthede te benut wanneer hulle hulle voordoen.

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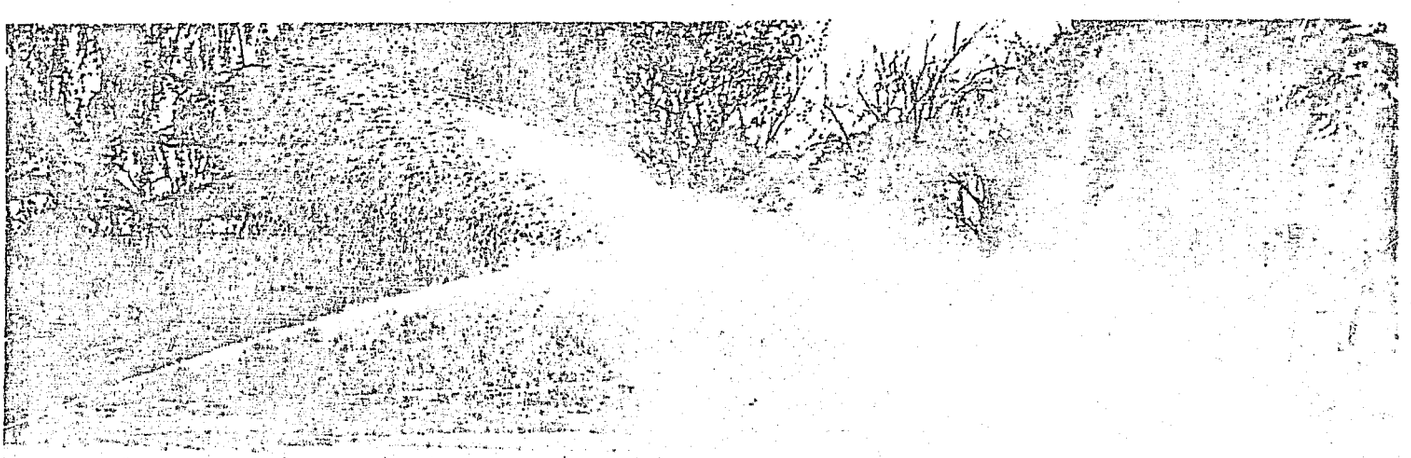

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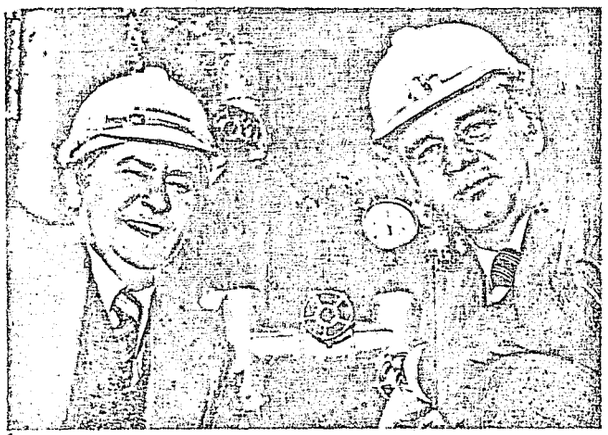
1 EM Crout, manager Stewarts & Lloyds, Cape Town and DR Hattingh, general manager, western region.
2 GJ Fourie, manager H Incledon & Co (SA) Ltd, Johannesburg, with LB van der Spuy, general manager northern region, at the Johannesburg General Hospital.

1 EM Crout, bestuurder Stewarts & Lloyds, Kaapstad, en DR Hattingh, algemene bestuurder, Westelike streek.
2 GJ Fourie, bestuurder H Incledon & Co (SA) Ltd, Johannesburg, met LB van der Spuy, algemene bestuurder, Noordelike streek, by die Johannesburgse Algemene Hospitaal.



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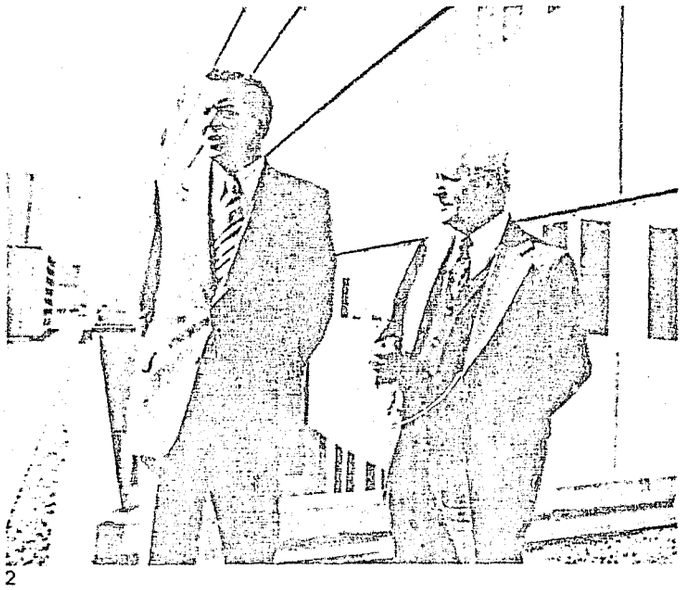

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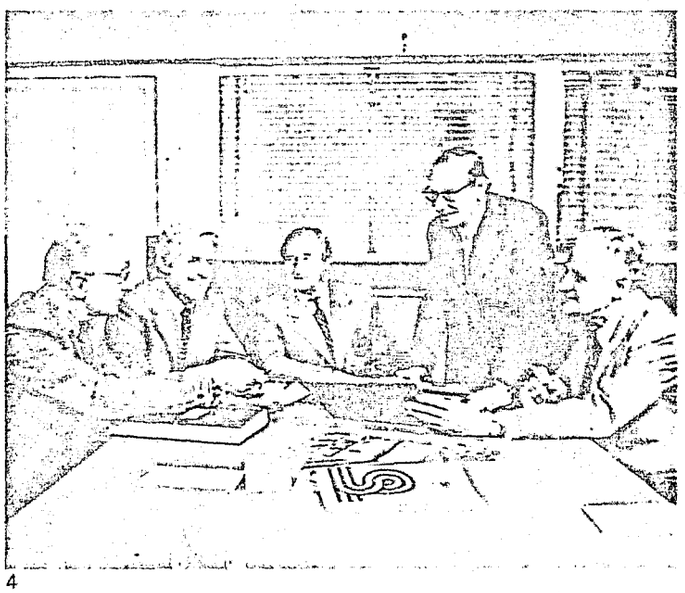
3 DG Mun-Gavin, general manager eastern region, at the Mondi Paper Mill, Merebank.
4 Rhodesian management: R Burningham, chairman of JH Vivian & Wilfred Watson (Pvt) Ltd, ER Fourie, secretary and regional accountant, P Munton Jackson, managing director of Stewarts & Lloyds of Rhodesia, HA Cole, manager Tubemakers of Rhodesia, and JJ Forrester general manager, Baldwins Rhodesia.
5 Steam pipe at the Orange Free State University was supplied by the group. Photographed are M Loftus, sales manager Stewarts & Lloyds Bloemfontein, JJ Biehler, general manager central region, LJ van den Heever, owner of Free State Pipe Fitters and KE Etherton, manager Stewarts & Lloyds Bloemfontein.

3 DG Mun-Gavin, algemene bestuurder Oostelike streek, by die Mondi-papierfabriek, Merebank.
4 Rhodesiese bestuur: R Burningham, voorsitter van JH Vivian & Wilfred Watson (Pvt) Ltd, ER Fourie, sekretaris en streeksrekenmeester, P Munton Jackson, bestuurende direkteur van Stewarts & Lloyds van Rhodesië, HA Cole, bestuurder Tubemakers of Rhodesia, en JJ Forrester, algemene bestuurder, Baldwins Rhodesië.
5 Stoompype by die Oranje-Vrystaatse Universiteit is deur die groep verskaf. Afgeneem is M Loftus, verkoopsbestuurder Stewarts & Lloyds, Bloemfontein, JJ Biehler, algemene bestuurder sentrale streek, LJ van den Heever, eienaar van Free State Pipe Fitters en KE Etherton, bestuurder Stewarts & Lloyds, Bloemfontein.



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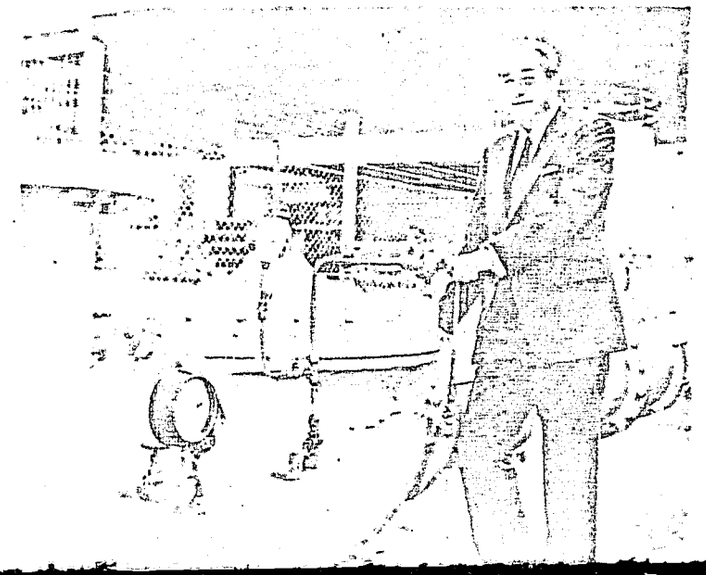

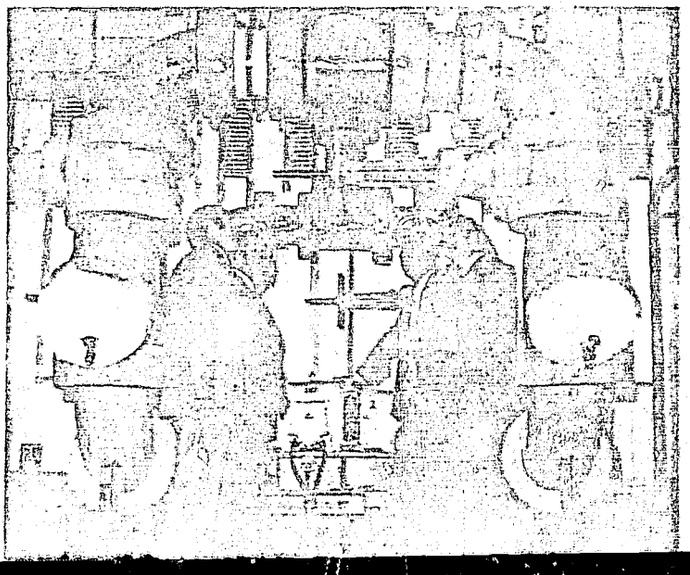

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rekenmeester, P Munton Jackson, besturende direkteur van Stewarts & Lloyds van Rhodesië, HA Cole, bestuurder Tubemakers of Rhodesia, en JJ Forrester, algemene bestuurder, Baldwins Rhodesië.

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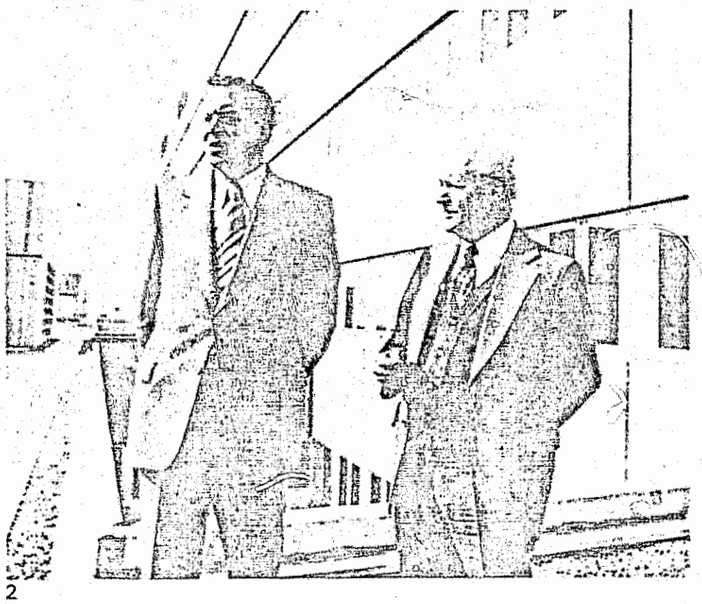

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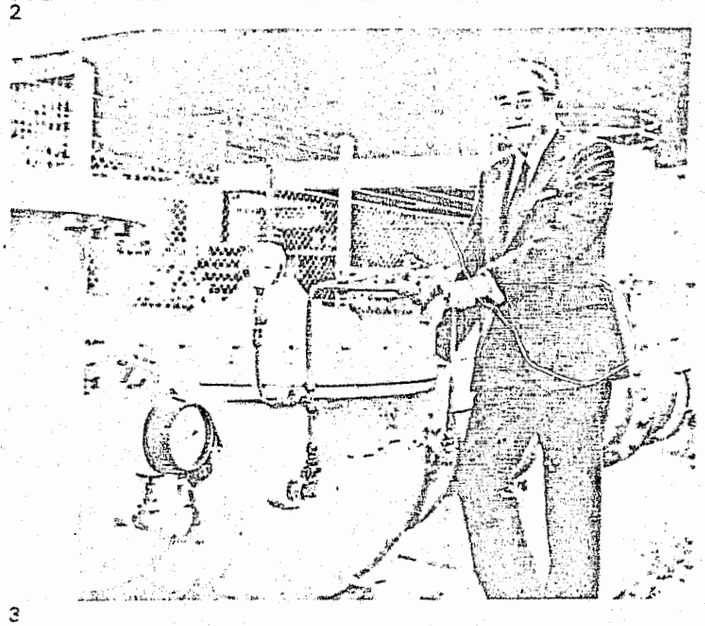

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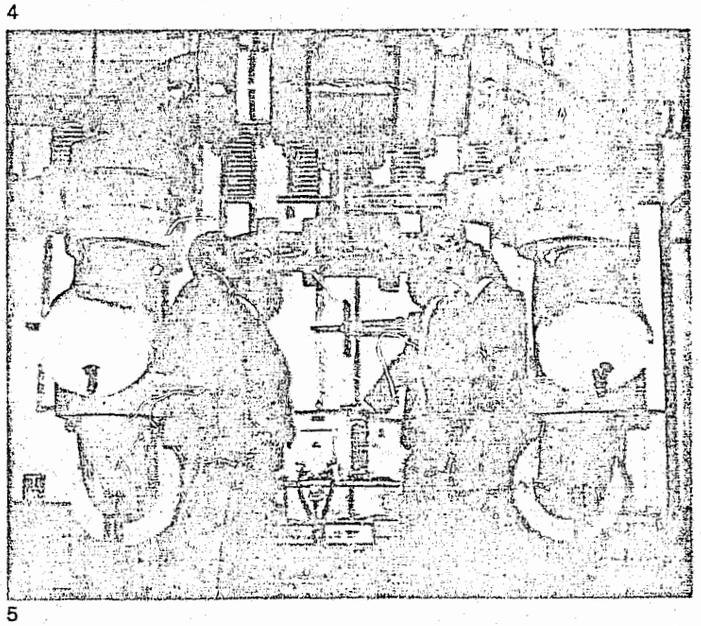


5

1 Saunders valves have been supplied in large quantities to the East Rand Gold and Uranium Company (ERGO) by JH Vivian & Co Ltd, whose Johannesburg manager, AJ Williams, is pictured.
2 Vosa Valves being loaded on to a Salvalve truck for delivery to Matla power station in the Eastern Transvaal.

1 Saunders-kleppe is in groot hoeveelhede verskaf aan die East Rand Gold and Uranium Company (ERGO) deur JH Vivian & Co Ltd [illegible]e se Johannesburgse bestuurder, AJ Williams, in die foto [illegible]skyn.
2 Vos[illegible]ppe wat op 'n Salvalve-vragmotor gelaai word vir aflewering na die Matla-kragstasie in Oos-Transvaal.

3 GG Villet, works manager, Que Que, and HA Cole, manager of Tubemakers of Rhodesia, inspect the fabricating shop of the Stewarts & Lloyds works, in Que Que.
4 'Ridgid' tools in the showroom of H Incledon & Co (SA) Ltd. who are agents for the Ridge Tool Co, of Elyria, USA.

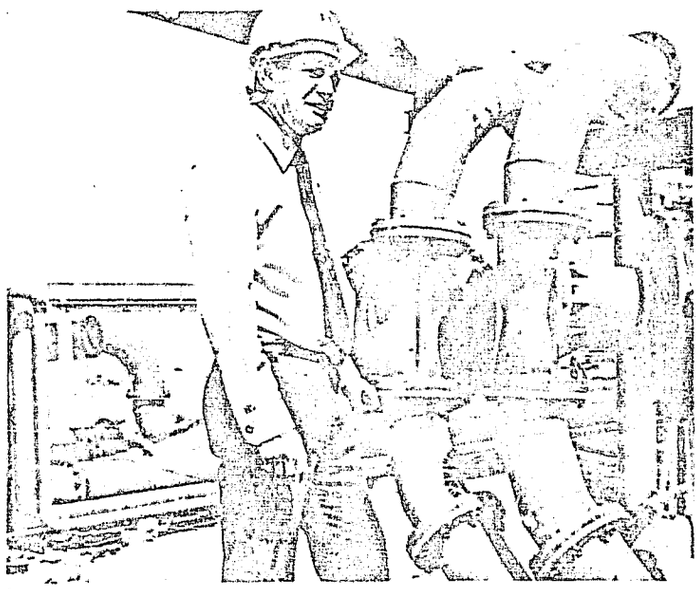
3 GG Villet, fabrieksbestuurder, Que Que, en HA Cole, bestuurder van Tubemakers of Rhodesia, ondersoek die vervaardigingswinkel van die Stewarts & Lloyds-fabriek by Que Que.
4 'Ridgid'-gereedskap in die vertoonkamer van H Incledon & Co (SA) Ltd wat agente is vir Ridge Tool Co van Elyria, VSA.

winsgewend presteer ondanks teëspoedige faktore.

Voortgesette mynbou-ontwikkeling het tot die prestasie van die Stewarts & Lloyds-takke bygedra, terwyl Baldwins nadelig getref is deur die afname in boubedrywigheid. Ondanks hierdie afname het Vivian and Watson voorspoedig gebly deur hulle op ander dele van hulle besigheid toe te spits, en deur die prysenswaardige vermoë wat hulle aan die dag gelê het om deel te neem aan die meeste van die groot projekte wat nou van stapel gestuur is.

In Malawi is 'n Stewarts & Lloyds-verkoopkantoor in Lilongwe geopen om die lang-gevestigde tak by Blantyre aan te vul. Die oogmerk was om nader aan die talryke bestaande klante in die gebied te beweeg en om voordeel te trek uit die planne van die Malawi-regering om landbou in die Noordelike provinsies van die land te ontwikkel. Die lofwaardige prestasie van die Malawi-maatskappy is behaal ten spyte van die leweringsprobleme wat die laste wat hierdie klein maar geesdriftige bestuurspan moet dra, nog verder verswaar.

Die Handelsafdeling, werksaam vanaf die Kaap tot Malawi, vanaf Durban tot die Atlantiese kus van Suidwes-Afrika, wissel aansienlik met betrekking tot handelstoestande en bemarkingspatrone sodat 'n algemene samevatting onmoontlik is.



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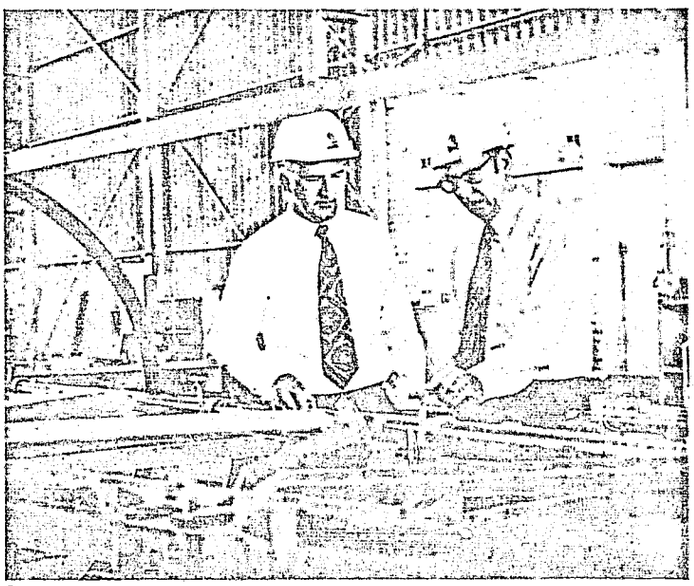

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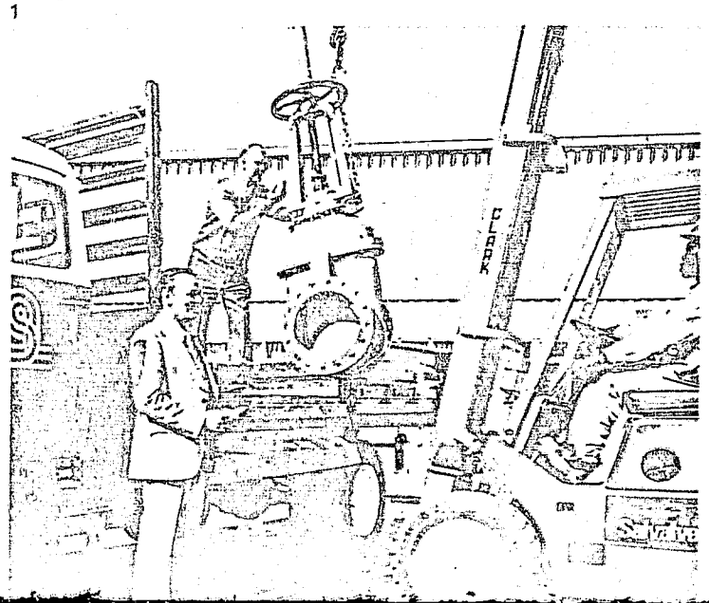

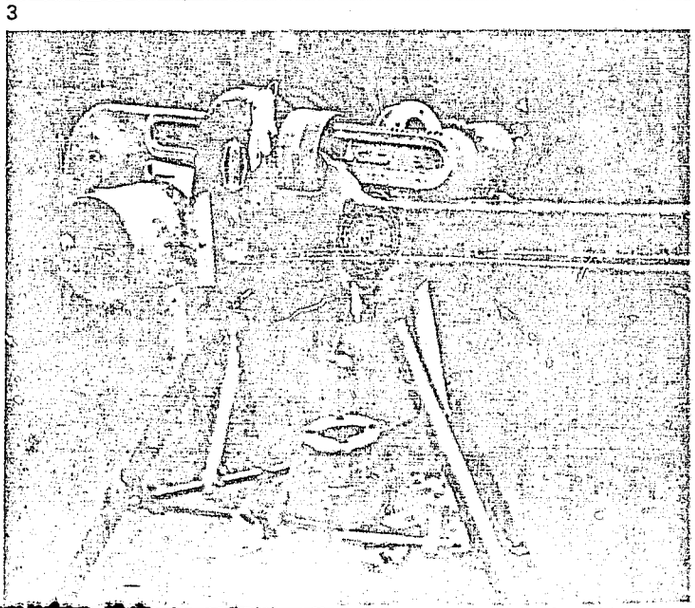

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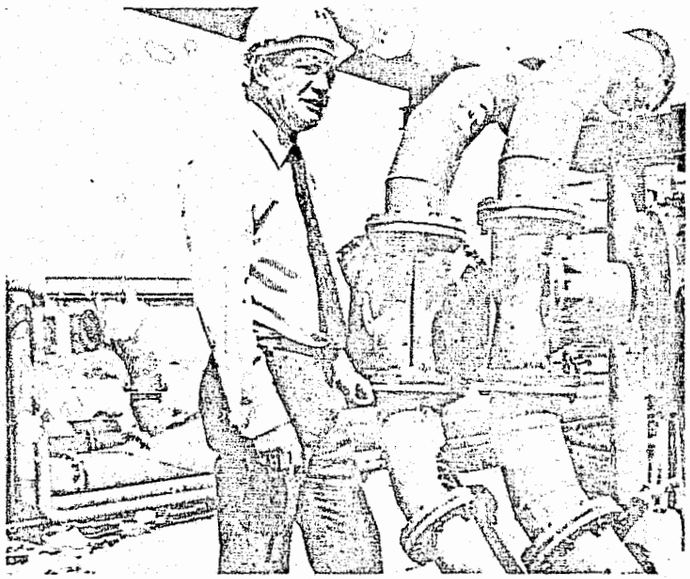

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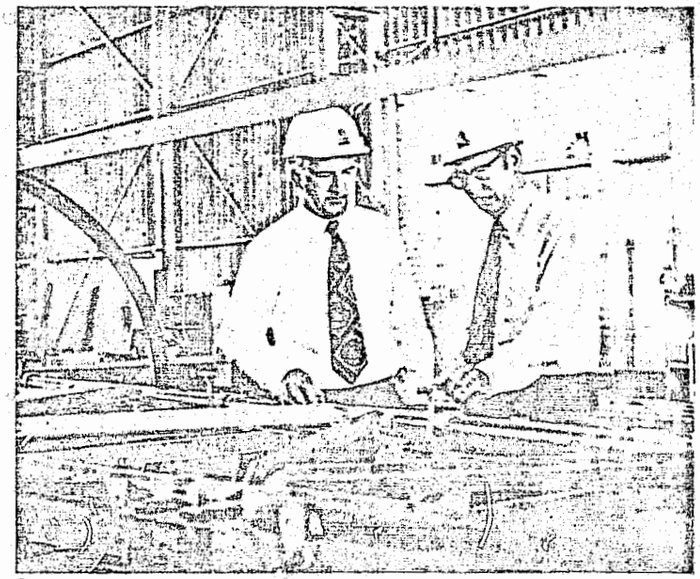

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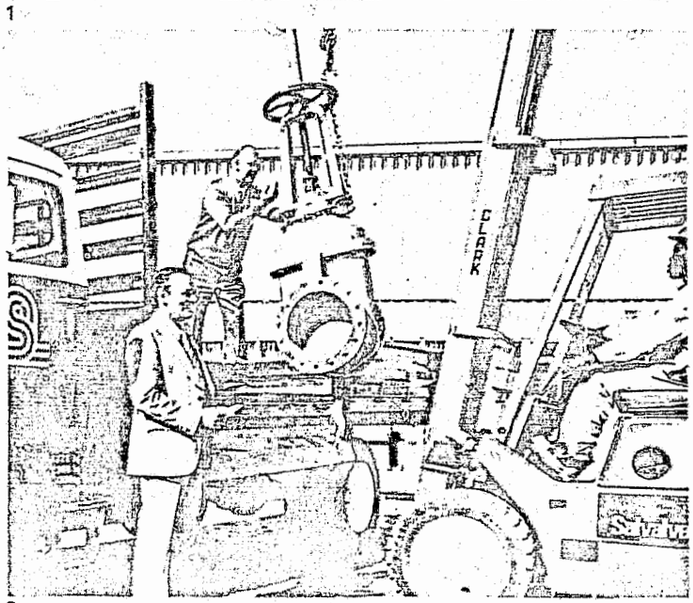

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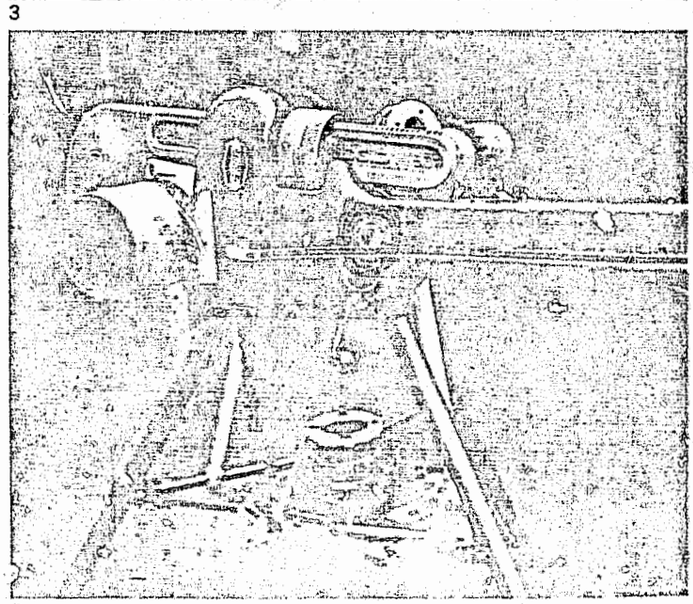

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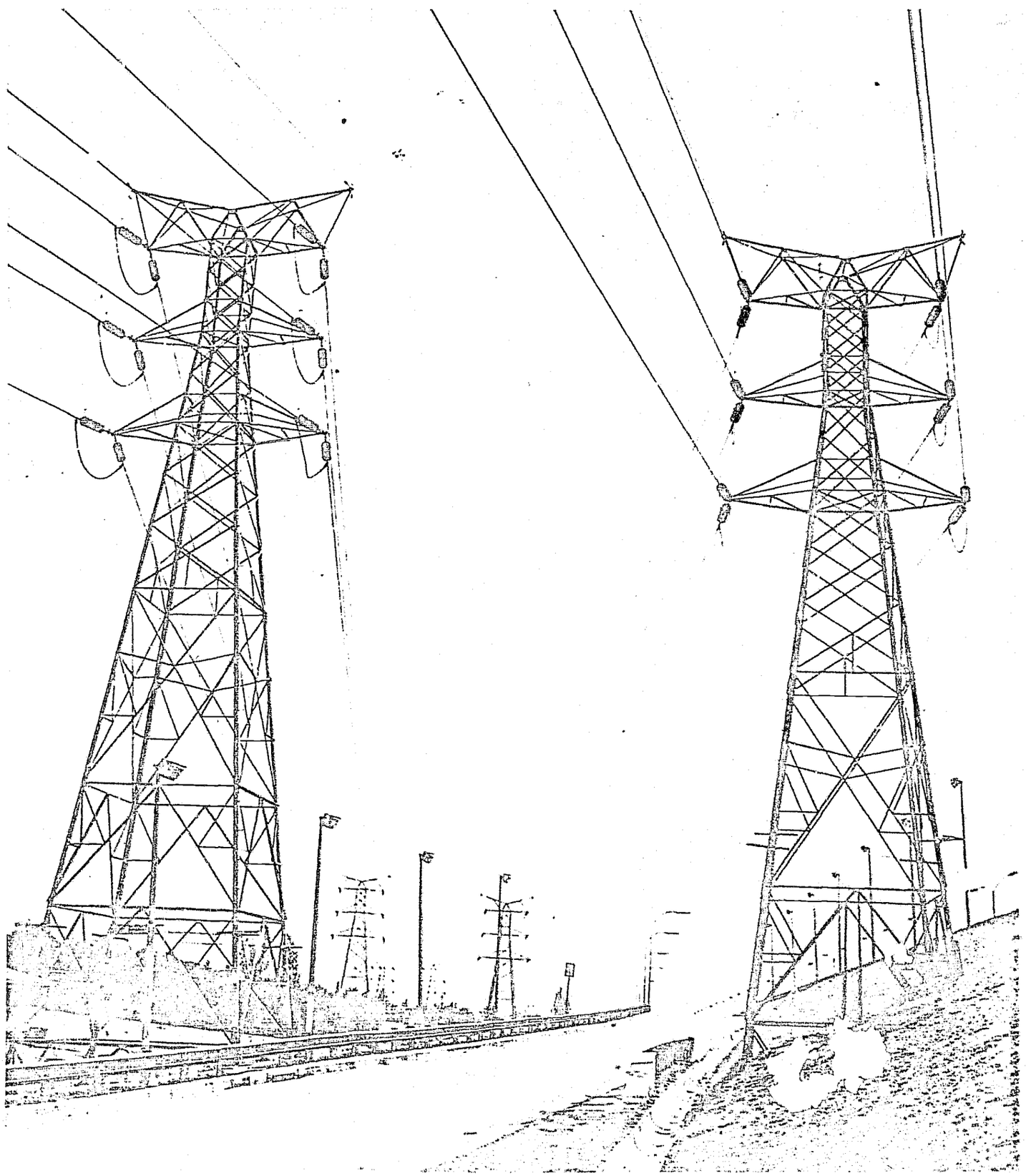
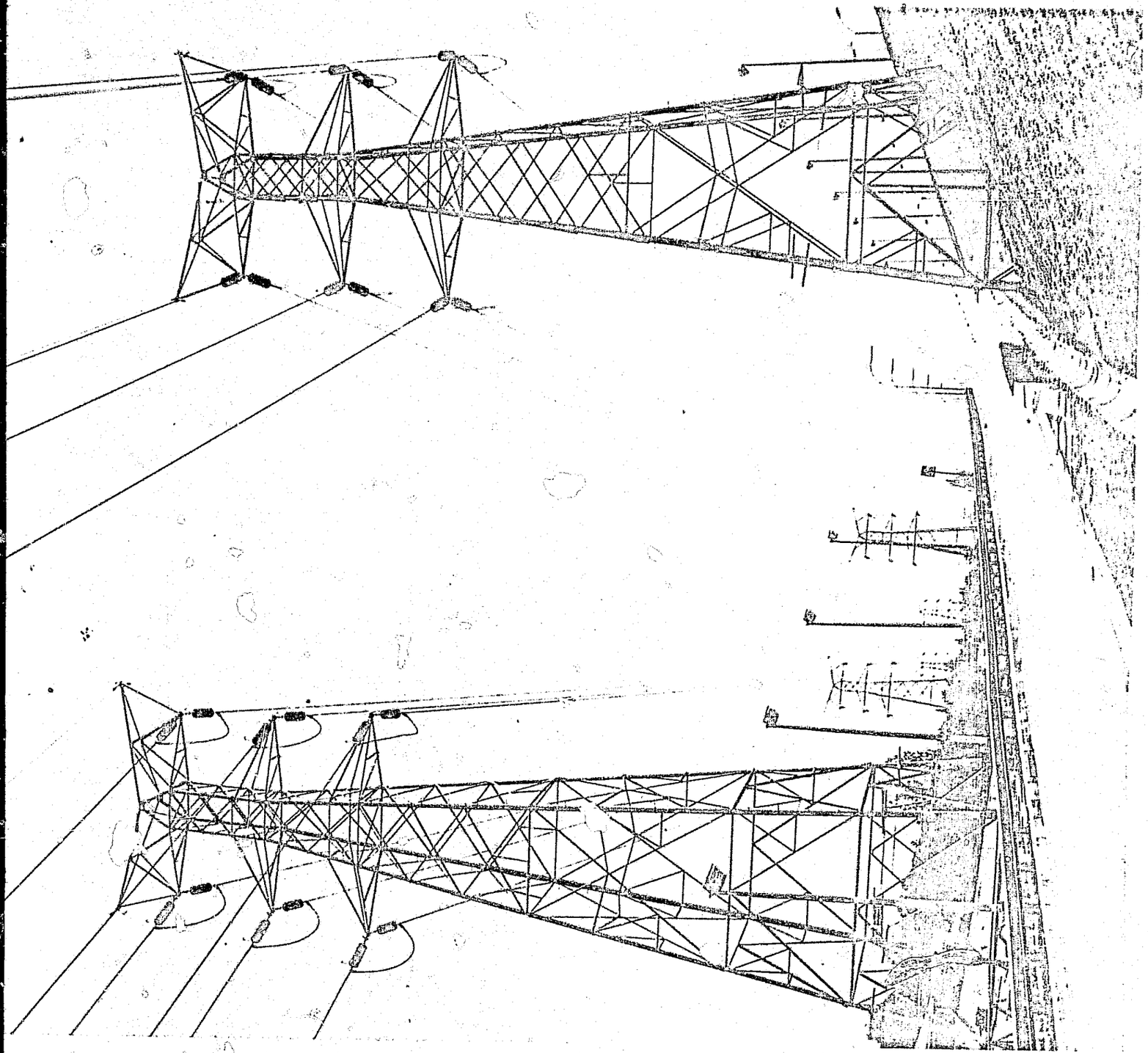
Pylons made from steel section, supplied by Baldwins Ltd, carry power lines all over South Africa. This example of these carefully engineered structures is in the Northern suburbs of Johannesburg.

Torings van profielstaal deur Baldwins Ltd verskaf, dra kraglyne oor die hele Suid-Afrika. Hierdie voorbeeld van hierdie noukeurig geïngenieurde strukture is in die Noordelike voorstede van Johannesburg.





Tubes Division

WI Spence
Executive director
Uitvoerende direkteur

FH Perkins
Accountant
Rekenmeester

PK Prentice
Personnel manager
Personeelbestuurder

The economic recession in South Africa persisted throughout the year and is now being felt in all markets served by the Tubes Division. Costs of labour and raw materials continued to increase affecting ultimate product costs. This, together with growing competition, resulted in reduced profit margins.

Management, while increasing efforts to obtain the maximum share of the reduced markets, has concentrated on controlling costs and curtailing expenses. Preparations, however, are being made to take advantage of the economic upturn when it occurs.

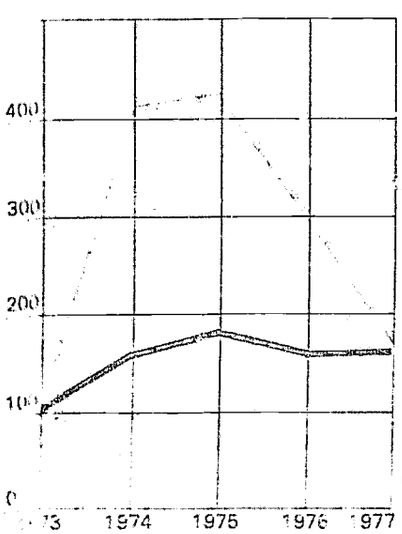
Tubemakers of South Africa Limited (Tosa), operating the steel tube manufacturing plant in Vereeniging, is the largest company in this division. Last year a multi-million expansion programme was announced and orders for capital equipment have been placed in Japan, the United States, Britain and South Africa. Much of the equipment is of a highly specialised nature and is obtainable only from overseas.

An important consideration in undertaking the programme is to reduce production costs and delivery times. The latter will result in a reduction in the level of stockholding.

This development at Vereeniging includes the replacement of the existing small bore welded tube mill by the latest type available and the full modernisation of all production lines. It is expected that the new plant will be in operation by about August 1978.

A new marketing department for Tosa, national in scope and based in Johannesburg, was set up during the year, the object being to prepare for a progressive and dynamic future.

The structural engineering division of Tosa is based in Germiston and has continued to develop tubular structures for use in industry and commerce. The modular three-dimensional space-frame system, using pyramidal units, which is being marketed under the name of 'Unibat' is a significant development in structural design concepts. Containerisation depots at both Durban and Johannesburg, the Datsun Centre and a new OK Bazaars hyperama at Durban, a new fresh produce market at Vereeniging, and a compact and unusual building for the Dansk Restaurant in the middle of Johannesburg, illustrate the variety of designs supplied and erected by this division.

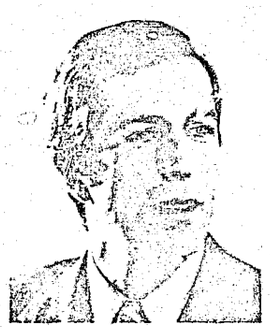


Relative movement of sales and income from a common base of 100 in 1973

Betreklike wisseling van afset en inkomste vanaf n gemeenskaplike basis van 100 in 1973

WF Spence
Executive director
Uitvoerende direkteur

FH Perkins
Accountant
Rekenmeester



PK Prentice
Personnel manager
Personeelbestuurder

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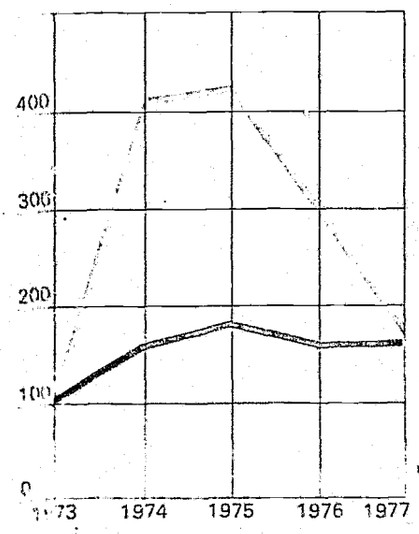


Relative movement of sales and income from a common base of 100 in 1973
Betreklike wisseling van afset en inkomste vanaf 'n gemeenskaplike basis van 100 in 1973

1 Tosa managers: C Pretorius, process planning and development. B Briggs, accountant, Y Yates, quality control, and D Jarvis, management information team.

1 Tosa-bestuurders: C Pretorius, bestuurder prosesbeplanning en -ontwikkeling, B Briggs, rekenmeester, Y Yates, kwaliteitsbeheer en D Jarvis, bestuursinligting.

2 Tosa has a new marketing team consisting of TS McCurdie, national sales manager, JM de Beer, assistant general manager, marketing, and J Orton, commercial manager.

2 Tosa het 'n nuwe bemarkingspan, wat bestaan uit TS McCurdie, nasionale verkoopsbestuurder, JM de Beer, assistent-hoofbestuurder, bemarking, en J Orton, kommersiële bestuurder.

Pypafdeling

Die ekonomiese resessie in Suid-Afrika het heeljaar voortgeduur en word in alle markte wat deur die Pypafdeling voorsien word, ondervind. Arbeids- en grondstofkoste het nog steeds in toenemende uitwerking gehad op die uiteindelike produksiekoste. Hierdie faktor, tesame met toenemende mededinging, het verminderde winsmarges tot gevolg gehad.

Die bestuur, wat intensiewe pogings aangewend het om die maksimum aandeel van die afgenome markte te verkry, het hulle terselfdertyd toegespits op die beheer van koste en die besnoeiing van onkoste. Voorbereidings word egter getref om voordeel uit die ekonomiese oplewing te trek sodra dit plaasvind.

Tubemakers of South Africa Limited (Tosa), wat die staalpypvervaardigingsaanleg in Vereeniging bestuur, is die grootste maatskappy in hierdie afdeling. Verlede jaar is 'n multimiljoen-uitbreidingsprogram aangekondig en bestellings vir kapitaaltoerusting is in Japan, die Verenigde State, Brittanje en Suid-Afrika geplaas. Heelwat van die toerusting is van hoogs gespesialiseerde aard en is slegs uit die buiteland verkrygbaar.

'n Belangrike beweegrede vir die onderneming van hierdie program is om produksiekoste en afleweringstye te verminder. Laasgenoemde sal 'n vermindering in voorraadhouding tot gevolg hê.

Dié ontwikkeling by Vereeniging behels die vervanging van die bestaande wals wat kleinboringsweispyp vervaardig deur die jongste soort wat beskikbaar is en die volle modernisasie van alle produksielyne. Na verwagting sal die nuwe aanleg teen Augustus 1978 in werking wees.

'n Nuwe bemarkingsafdeling vir Tosa, van nasionale omvang en in Johannesburg geleë, is gedurende die jaar gestig. Die doel hiervan is om voorbereidings te tref vir 'n vooruitstrewende en dinamiese toekoms.

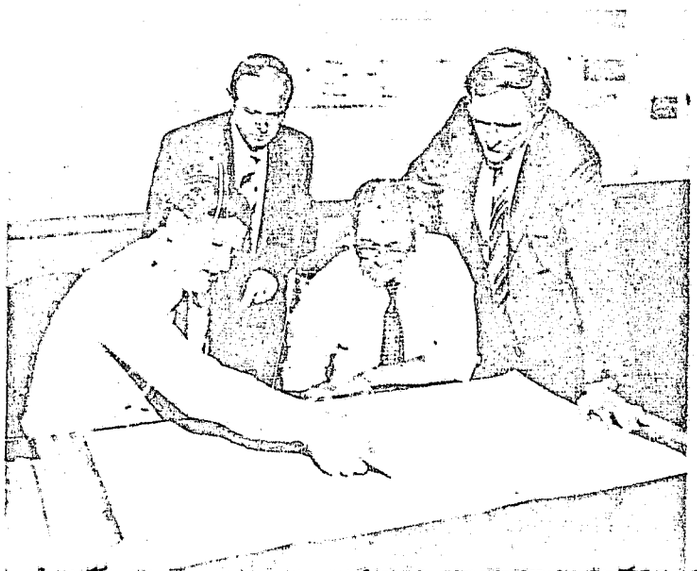
Die Tosa-afdeling vir struktuuringenieurswerk is in Germiston geleë en gaan voort met sy ontwikkeling van pypstrukture vir gebruik in die nywerheid en handel. Die modulêre driedimensionale spasieerraamstelsel wat piramidevormige eenhede gebruik en onder die naam 'Unibat' bemark word, is 'n belangrike ontwikkeling in struktuur-ontwerpkonsepte. Vraghouervervoerdepots by Durban sowel as Johannesburg, die Datsun-sentrum en 'n nuwe OK Bazaars-hyperama by Durban, 'n nuwe groentemark by Vereeniging en 'n kompakte en merkwaardige gebou vir die Dansk-restourant in midde-Johannesburg, illustreer die verskeidenheid ontwerpe wat deur hierdie afdeling verskaf en opgerig word.

By King William's Town het moderne aanleg wat verlede jaar deur Bundy Tubing Co of South Africa geïnstalleer is, die vermoë om aan meer as die huidige vraag na Bundyweldpype en bewerkte produkte te voldoen. Motorvoertuigverkope het afgeneem met die gevolg dat die mark in hierdie segment flou is en daar is feitlik geen verbetering in die ander hoofmark, nl. yskasonderdele nie.

Die vraag na die produkte van Maksal Tubes (Pty) Limited, wat op groot skaal in die bounywerheid gebruik word, is nog steeds benede gemiddeld en sal op hierdie vlak bly tot tyd en wyl die vraag na behuising toeneem.

By Pipe Couplings (Pty) Limited, Chamdor, was besigheid nog steeds traag. Die vervaardiging van flenspasstukke van twee en drie meter deursnee vir kragstasies vereis die installasie van gespesialiseerde toerusting. Die maatskappy soek na nuwe afsetpunte vir koppelings om die flou mark wat tans bestaan, teen te werk.

Die stigting van Plasal (Pty) Limited as 'n afsonderlike entiteit (dit was voorheen die plastiekafdeling van Stewarts & Lloyds) het 'n belangrike ontwikkeling geblyk te wees. 'n Lewenskragtige veldtog is onderneem om moontlike nuwe produk-/marksegmente te ontwikkel.



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Dié ontwikkeling by Vereeniging behels die vervanging van die bestaande wals wat kleinboringsweispyp vervaardig deur die jongste soort wat beskikbaar is en die volle modernisasie van alle produksielyne. Na verwagting sal die nuwe aanleg teen Augustus 1978 in werking wees.

'n Nuwe bemarkingsafdeling vir Tosa, van nasionale omvang en in Johannesburg geleë, is gedurende die jaar gestig. Die doel hiervan is om voorbereidings te tref vir 'n vooruitstrewende en dinamiese toekoms.

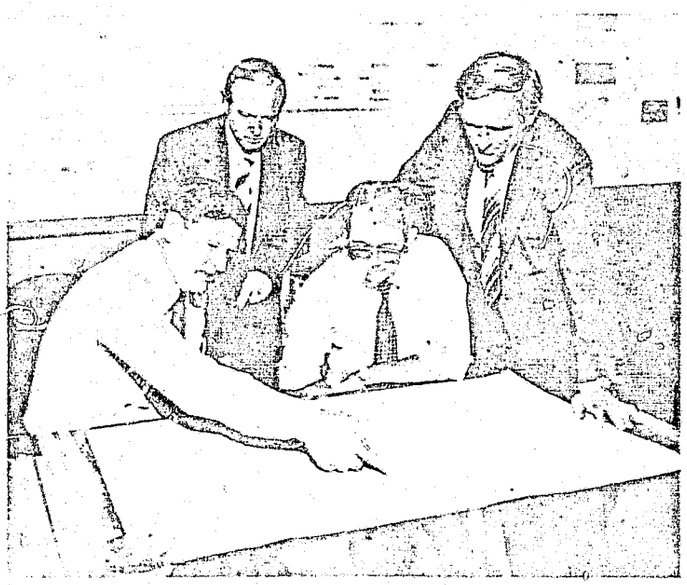
Modulêre driedimensionale spasieraamstelsel wat piramidevormige eenhede gebruik en onder die naam 'Unibat' bemark word, is 'n belangrike ontwikkeling in struktuur-ontwerpkonsepte. Vraghouervervoerdepots by Durban sowel as Johannesburg, die Datsun-sentrum en 'n nuwe OK Bazaars-hyperama by Durban, 'n nuwe groentemark by Vereeniging en 'n kompakte en merkwaardige gebou vir die Dansk-restourant in midde-Johannesburg, illustreer die verskeidenheid ontwerpe wat deur hierdie afdeling verskaf en opgerig word.

By King William's Town het moderne aanleg wat verlede jaar deur Bundy Tubing Co of South Africa geïnstalleer is, die vermoë om aan meer as die huidige vraag na Bundyweldpype en bewerkte produkte te voldoen. Motorvoertuigverkope het afgeneem met die gevolg dat die mark in hierdie segment flou is en daar is feitlik geen verbetering in die ander hoofmark, nl. yskasonderdele nie.

Die vraag na die produkte van Maksal Tubes (Pty) Limited, wat op groot skaal in die bounywerheid gebruik word, is nog steeds benede gemiddeld en sal op hierdie vlak bly tot tyd en wyl die vraag na behuising toeneem.

By Pipe Couplings (Pty) Limited, Chamdor, was besigheid nog steeds traag. Die vervaardiging van flenspasstukke van twee en drie meter deursnee vir kragstasies vereis die installasie van gespesialiseerde toerusting. Die maatskappy soek na nuwe afsetpunte vir koppelings om die flou mark wat tans bestaan, teen te werk.

Die stigting van Plasal (Pty) Limited as 'n afsonderlike entiteit (dit was voorheen die plastiekafdeling van Stewarts & Lloyds) het 'n belangrike ontwikkeling geblyk te wees. 'n Lewenskragtige veldtog is onderneem om moontlike nuwe produk-/marksegmente te ontwikkel.



1

2

1 Café Dansk, in the heart of Johannesburg's shopping and business area, which has a spaceframe steel roof.

2 Plasal (Pty) Ltd are not only manufacturers of polythene and PVC tubing but also polypropylene strapping.

1 Kafee Dansk, in die hartjie van Johannesburg se winkel- en sakegebied, wat 'n spasieerraamstaaldak het.

2 Plasal (Pty) Ltd is nie net vervaardigers van politeen en PVC-pyp nie, maar ook van polipropileenbelatting.

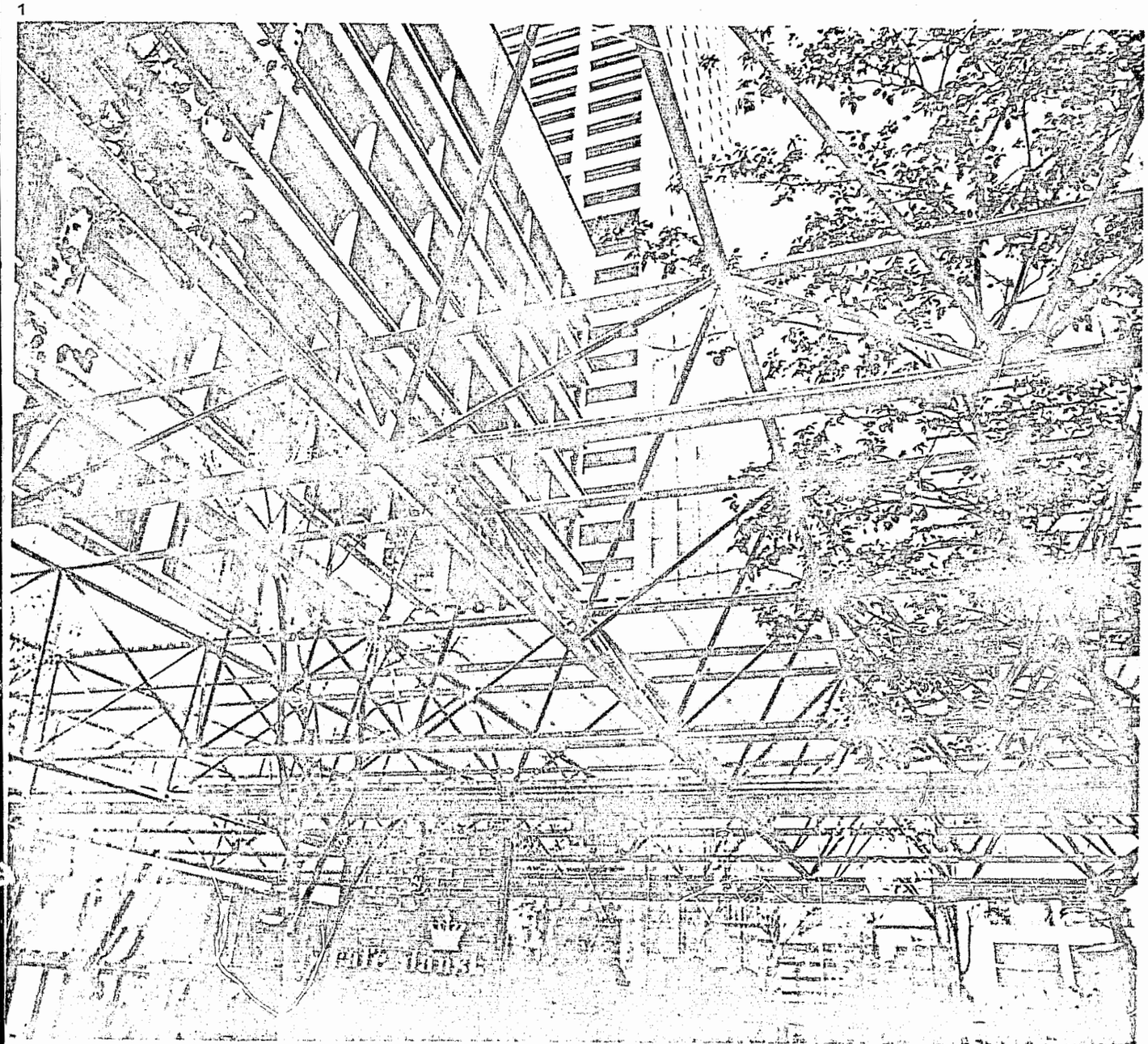
At King William's Town, modern plant installed last year by Bundy Tubing Co of South Africa, has a capacity well in excess of current demand for Bundyweld tubing and manipulated products. Motor vehicle sales have dropped, with the result that the market in this segment has been depressed and there is little improvement in the other major market, refrigerator components.

The demand for the products of Maksal Tubes (Pty) Limited, used extensively in the building industry, has continued to be below average and will remain so until the demand for housing increases.

At Pipe Couplings (Pty) Limited, Chamdor, business continued to be slow. The manufacture of two and three metre diameter flange adaptors for electricity generating stations, required the installation of specialised equipment. The company is pursuing new outlets for couplings to offset the current generally depressed market.

The creation of Plasal (Pty) Limited, a separate entity (it was previously the plastics division of Stewarts & Lloyds) has proved a significant development. A vigorous campaign has been undertaken to develop prospective new product/market segments.

1



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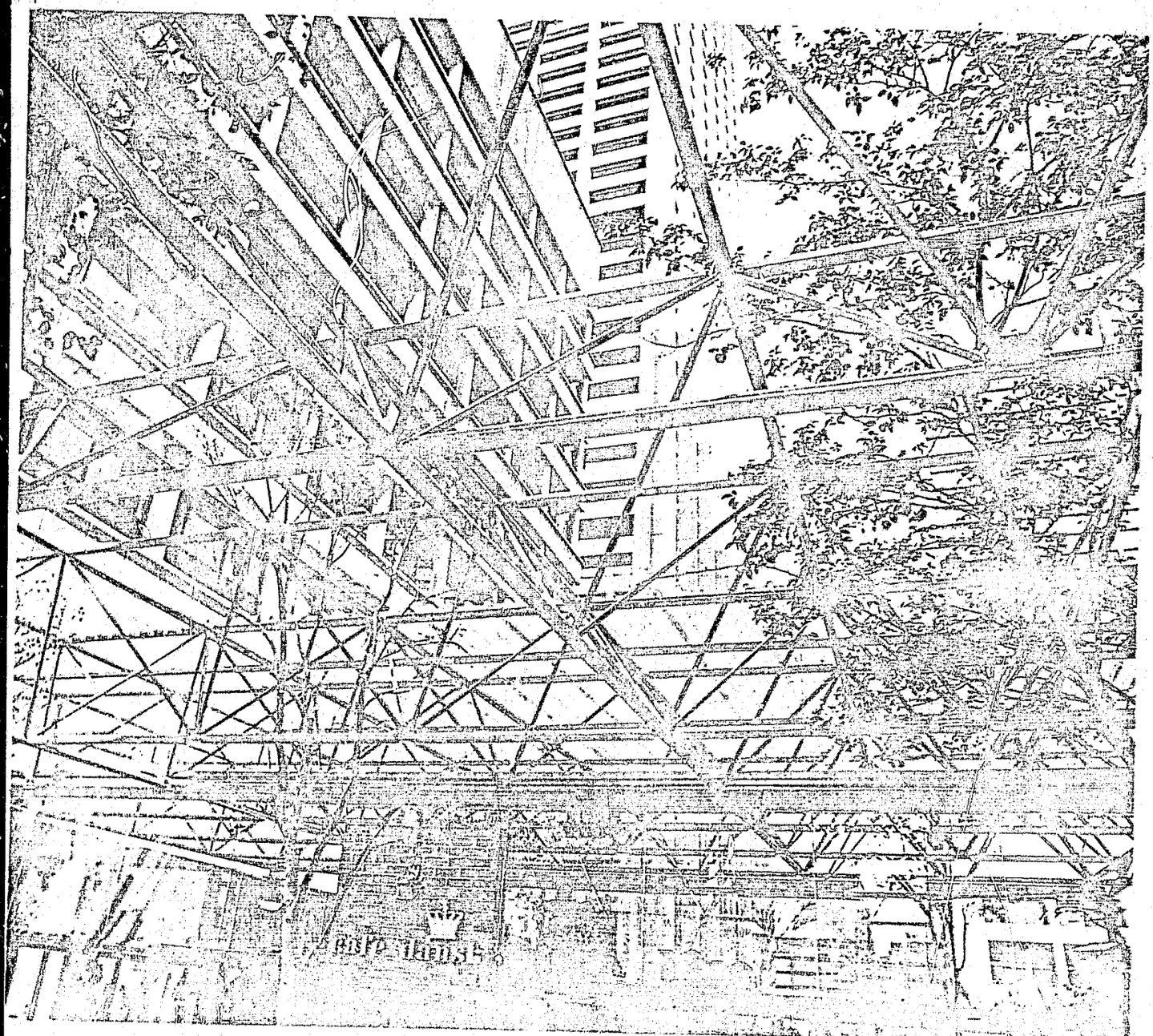
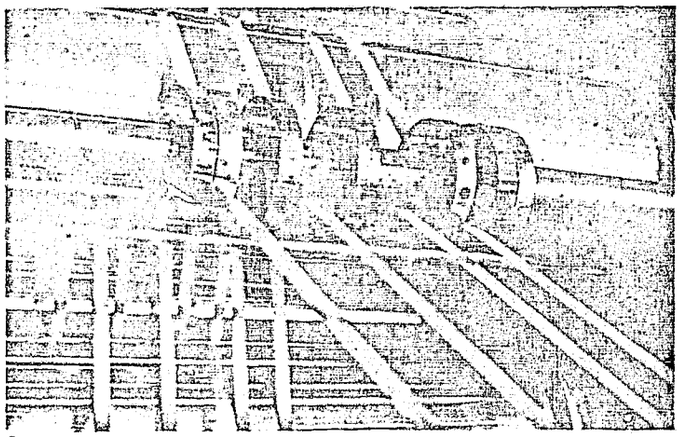


3 The production team in the Tosa works: D Braddock, chief engineer, RD Wilson, assistant general manager, production and engineering, and JH Dawe, manager production planning.
4 DE Raubenheimer, managing director and JC Brown, works director of Maksal Tubes (Pty) Ltd.

3 Die produksiespan in die Tosa-fabriek: D Braddock, hoofingenieur, RD Wilson, assistent-hoofbestuurder, produksie en ingenieurswerk, en JH Dawe, bestuurder produksiebeplanning.
4 DE Raubenheimer, besturende direkteur en JC Brown, fabrieksbestuurder van Maksal Tubes (Pty) Ltd.

5 E Scott-Dawkins, general manager, and MK Schirnig, production manager of Bundy Tubing Co of SA (Pty) Ltd.
6 T Ryan, marketing manager of Pipe Couplings (Pty) Ltd, with IE Westmoreland, the company's general manager.
7 Poles are not only highly functional, but are also used for decorative purposes.

5 E Scott-Dawkins, algemene bestuurder, en MK Schirnig, produksiebestuurder van Bundy Tubing Co of SA (Pty) Ltd.
6 T Ryan, bemarkingsbestuurder van Pipe Couplings (Pty) Ltd, met IE Westmoreland, die maatskappy se algemene bestuurder.
7 Pale is nie net hoogs funksioneel nie maar word ook vir sierdoeleindes gebruik.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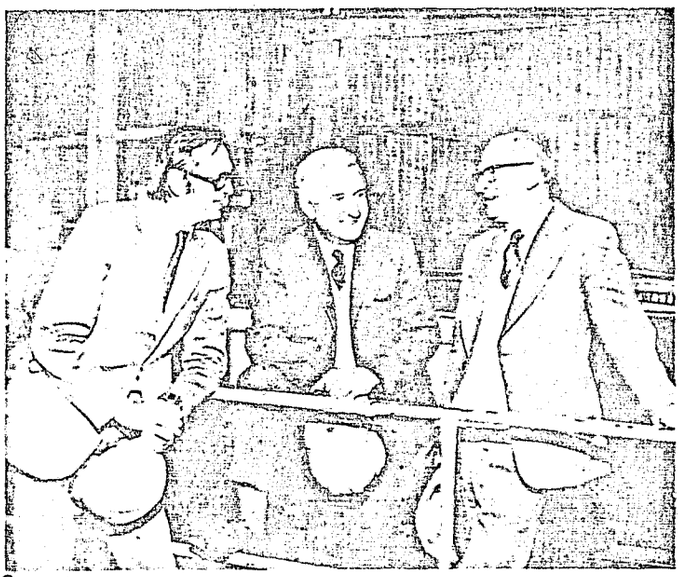
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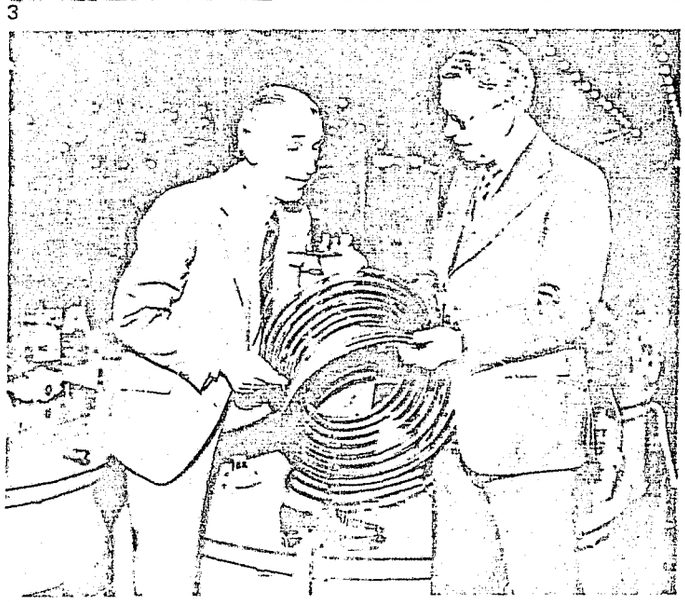
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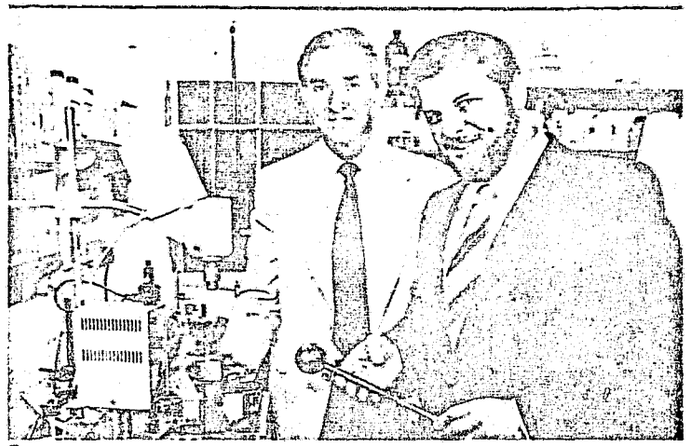
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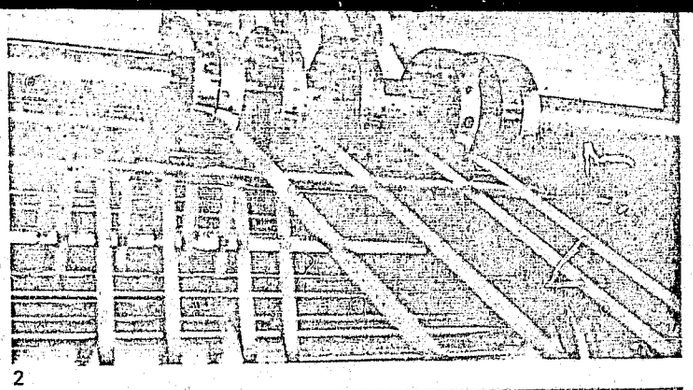

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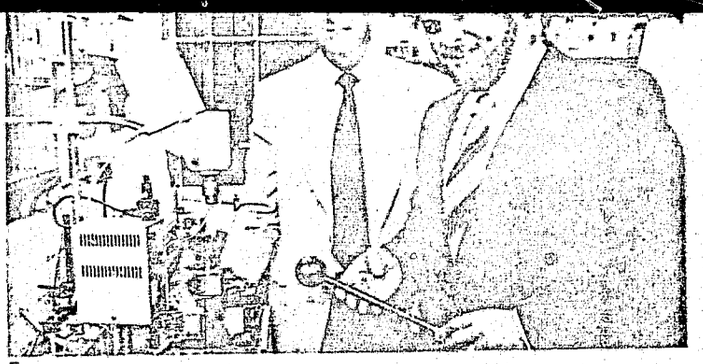

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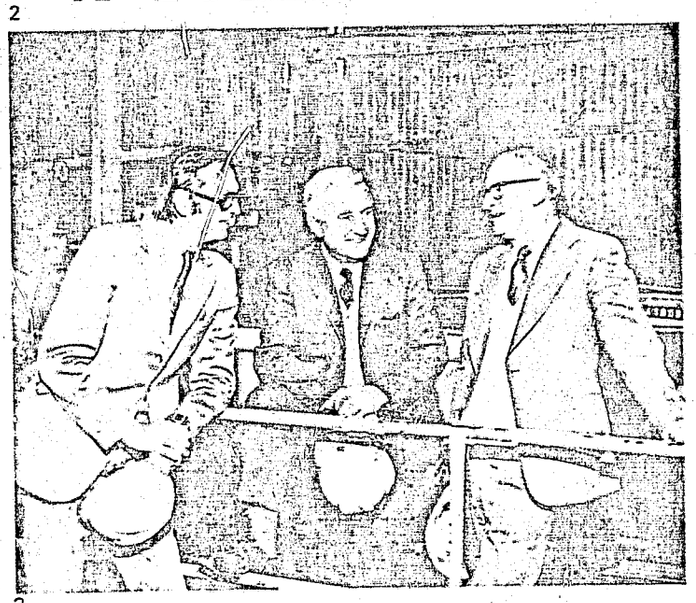

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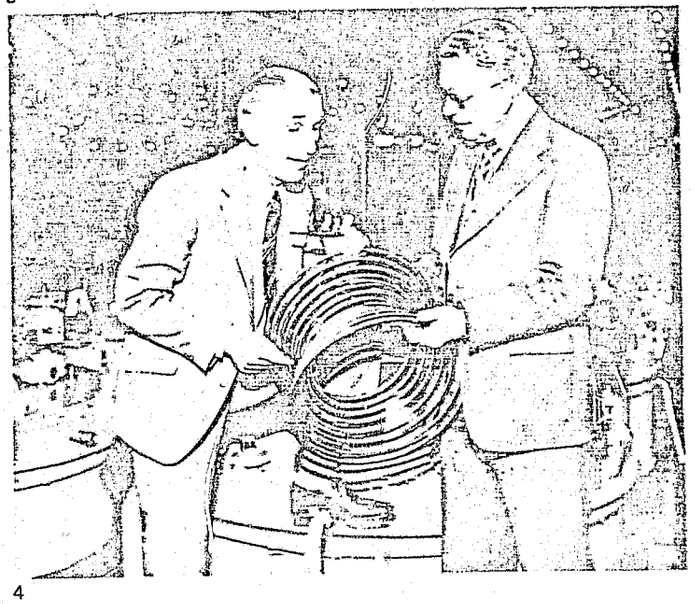

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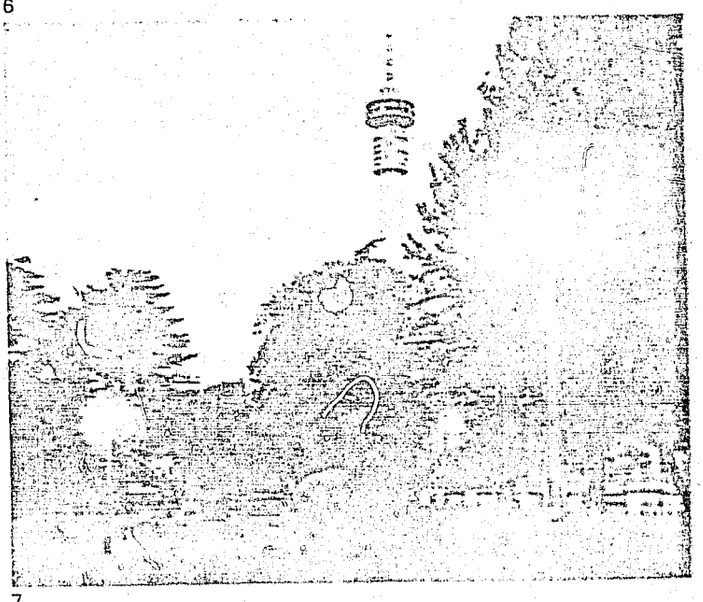

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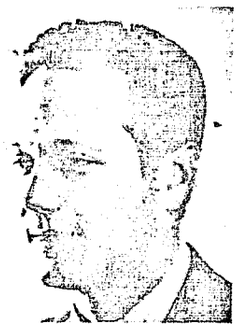
HA Godwin
Executive director
Uitvoerende bestuurder

CA Kuhnert
Accountant
Rekenmeester



DA Nolte
Manager, strategic planning and development
Bestuurder, strategiese beplanning en ontwikkeling

Foundry Division

The depression in the foundry industry in South Africa is probably worse than the previous year, with plants in the country as a whole operating well below maximum capacity. Both African Malleable Foundries and Vosa Valves were affected by the downturn, and sales forecasts were not achieved. Particularly fierce price competition was experienced in the valve market.

A proposed modernisation programme at the African Malleable Foundries Limited plant at Benoni, is aimed at automation, which will result in man hour costs per ton of castings produced being substantially reduced.

At J&C Malleable (Pty) Limited, Boksburg, plans have been developed towards entering the spheroidal graphite iron market. This is a ductile iron which is increasingly replacing certain steel, iron and large malleable castings on a world wide basis.

Although Vosa Valves Incorporated, in the USA, has closed down, two product outlets in that country have been retained. Vosa has also been successful in exporting to the Far East during the year.

The Foundry Division is facing a difficult year, but action has already been taken to minimise, as far as possible, the adverse effects of the current economic conditions.

Gieteryafdeling

Die depressie in die Gieteryafdeling in Suid-Afrika is waarskynlik erger as die vorige jaar, met aanlêe wat landswyd ver benede maksimum kapasiteit werk. African Malleable Foundries sowel as Vosa Valves is nadelig deur die verslapping getref en voorspelde verkope is nie behaal nie. Besondere strawwe prysmededinging is in die klepmark ondervind.

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By J&C Malleable (Pty) Limited, Boksburg, is daar beplan om die mark vir sferoïde grafietyster te betree. Hierdie is 'n rekbare yster wat op wêreldwye basis in al hoe groter mate sekere staal-, yster- en groot smeebare gietstukke vervang.

Alhoewel Vosa Valves Incorporated in die VSA gesluit het, is twee produkafsetpunte in daardie land behou. Vosa het ook gedurende die jaar met welslae na die Verre Ooste uitgevoer.

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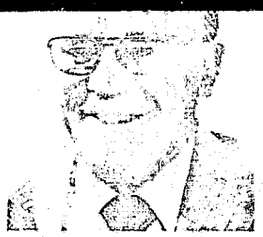

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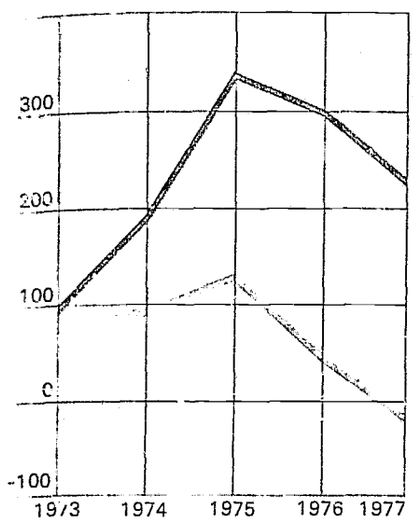
Tapping of molten 'Meehanite' metal at Vosa Valves (Pty) Ltd's foundry

Gesmelte 'Meehanite'-metaal word by Vosa Valves (Pty) Ltd se gieterY gegiet.

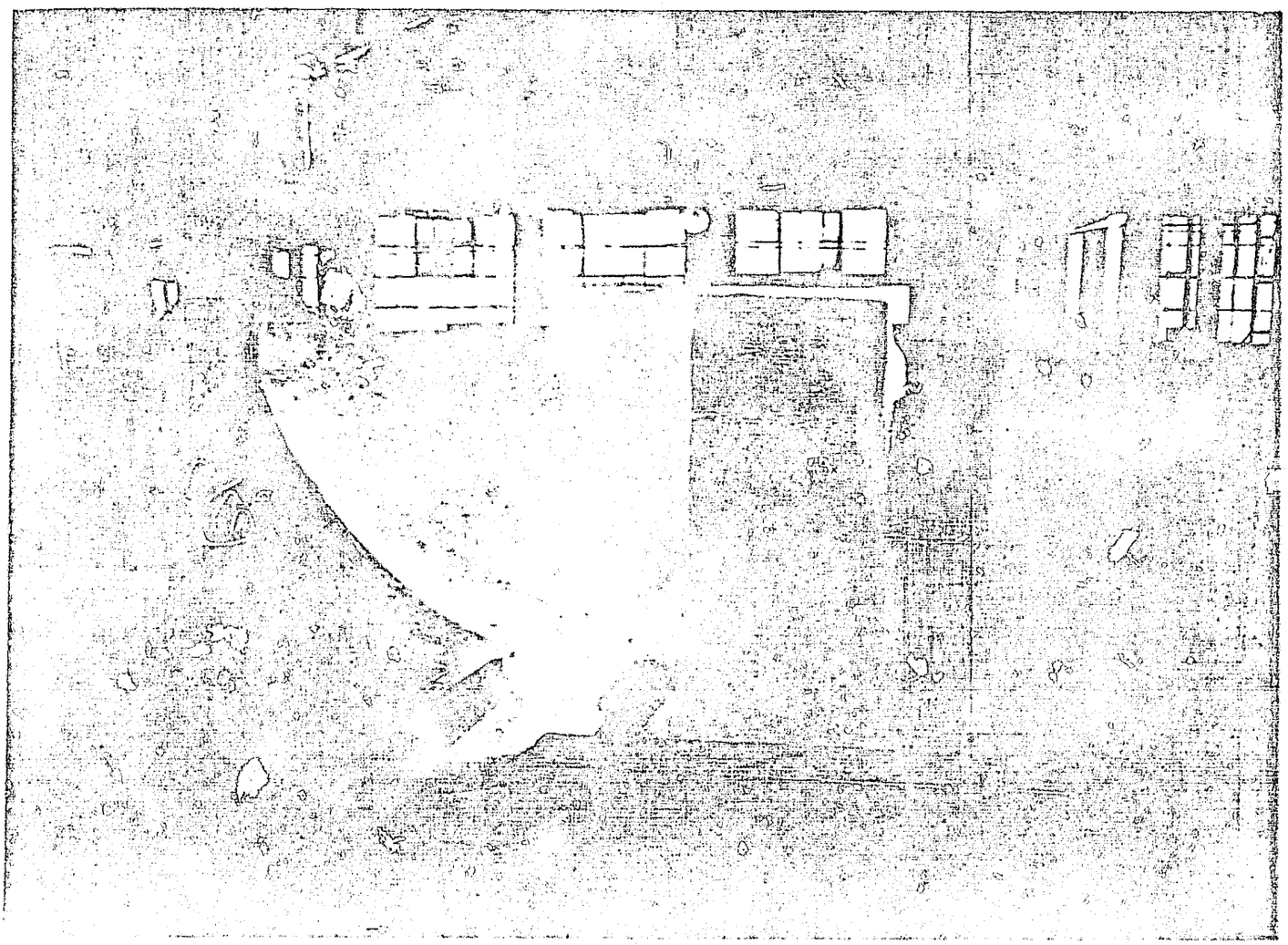


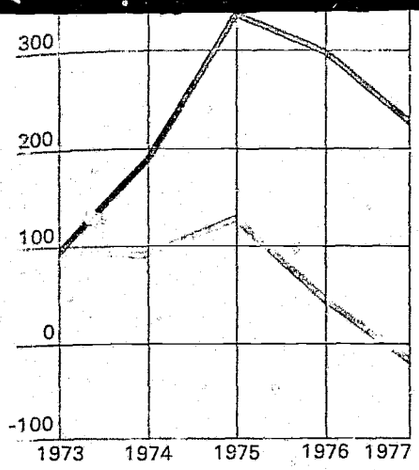
Relative movement of sales and income from a common base of 100 in 1973

Betreklike wisseling van afset en inkomste vanaf 'n gemeenskaplike basis van 100 in 1973

Pre-tax income
Inkomste vóór belasting

Sales
Afset





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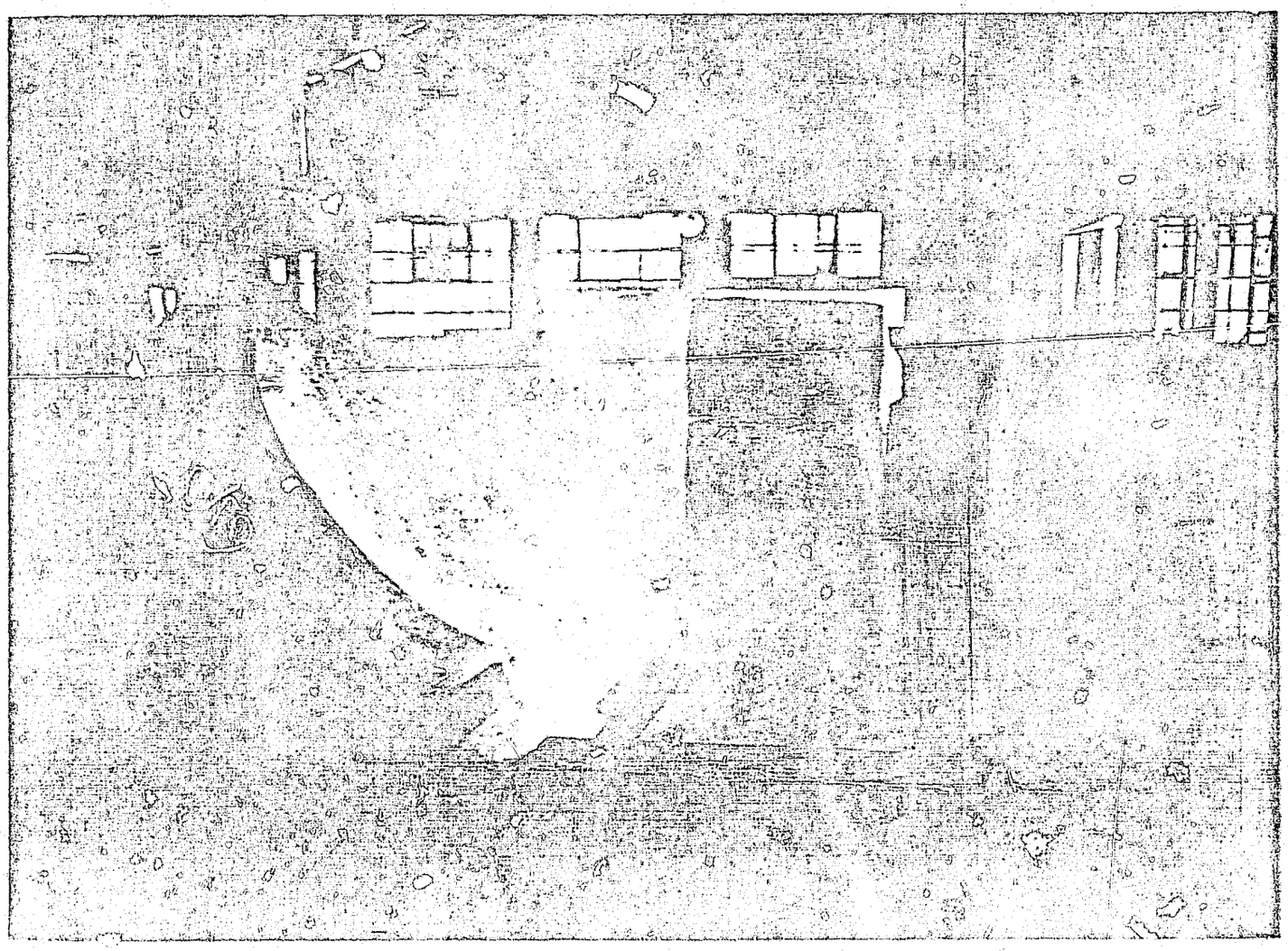
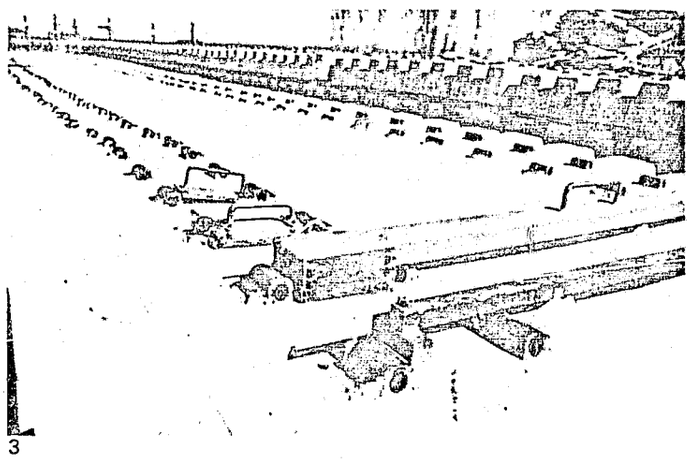


1 AH Patrick, manufacturing manager and AJ Kruger, technical manager, AMF/J&C foundries.
2 H du Preez, general manager, GH Stroebel, works director of Vosa Valves (Pty) Ltd, and JP Malan of the South African Bureau of Standards examine an SABS approved valve.
3 J&C Malleable (Pty) Ltd is supplying cast iron components for use on railway sleepers.

1 AH Patrick, vervaardigingsbestuurder en AJ Kruger, tegniese bestuurder AMF-/J&C-gieterye.
2 H du Preez, algemene bestuurder, GH Stroebel, fabriekbestuurder van Vosa Valves (Pty) Ltd en JP Malan van die Suid-Afrikaanse Buro vir Standaarde ondersoek 'n klep wat deur die SABS goedgekeur is.
3 J&C Malleable (Pty) Ltd verskaf gietysteonderdele vir gebruik by spoordwarslêers.

4 D Brown, marketing manager commercial castings, AMF/J&C foundries, examining wheel castings.
5 G Anderson, marketing manager distributive products, and AS Boynton-Lee, general manager of AMF/J&C foundries.

4 D Brown, bemarkingsbestuurder kommersiële gietstukke, AMF-/J&C-gieterye, ondersoek wielgietstukke.
5 G Anderson, bemarkingsbestuurder verspreiprodukte, en AS Boynton-Lee, algemene bestuurder van AMF-/J&C-gieterye.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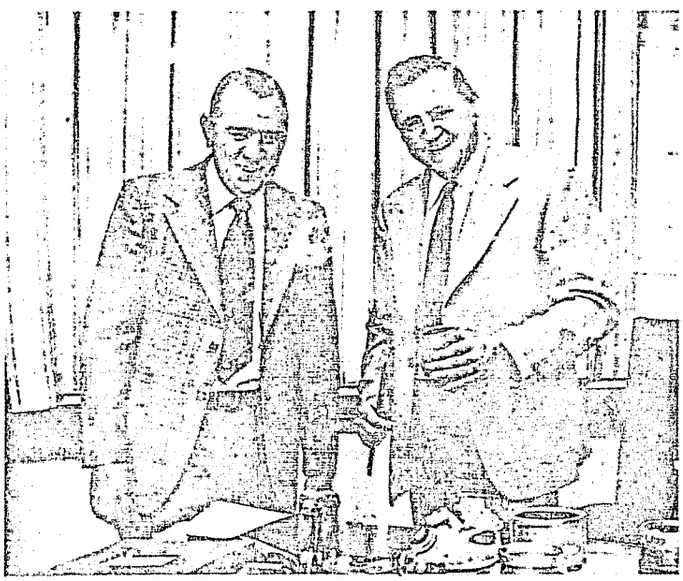
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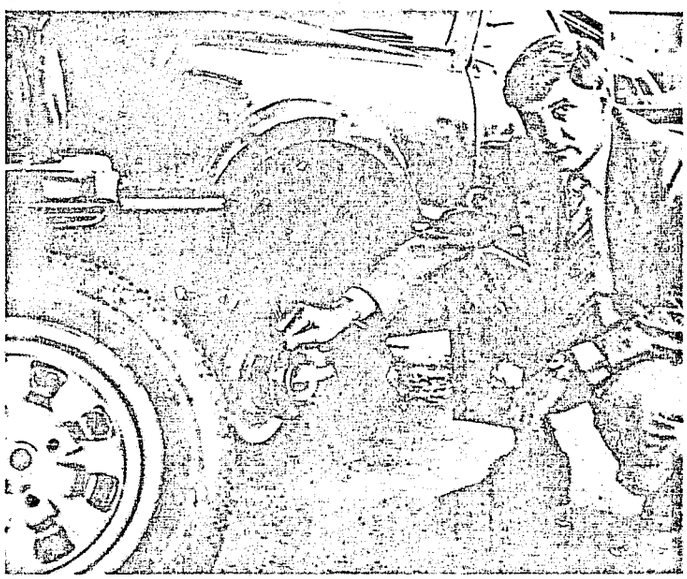
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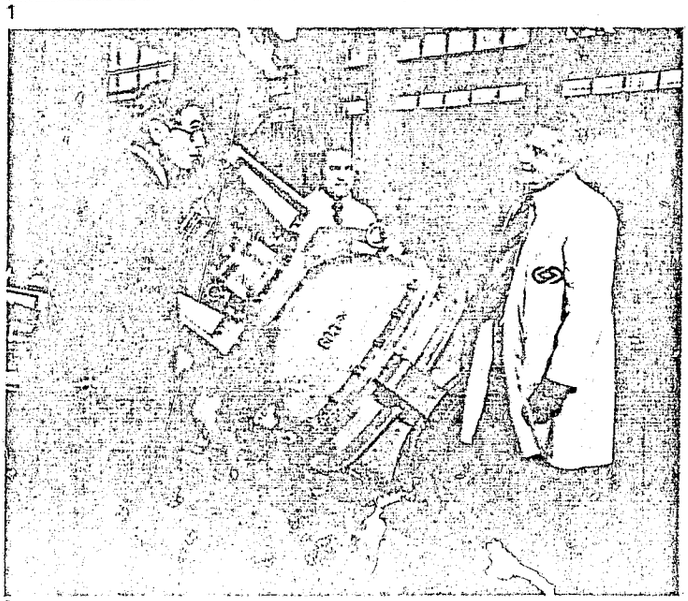
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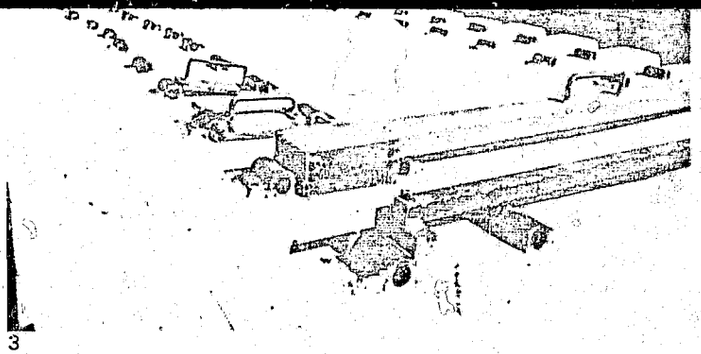

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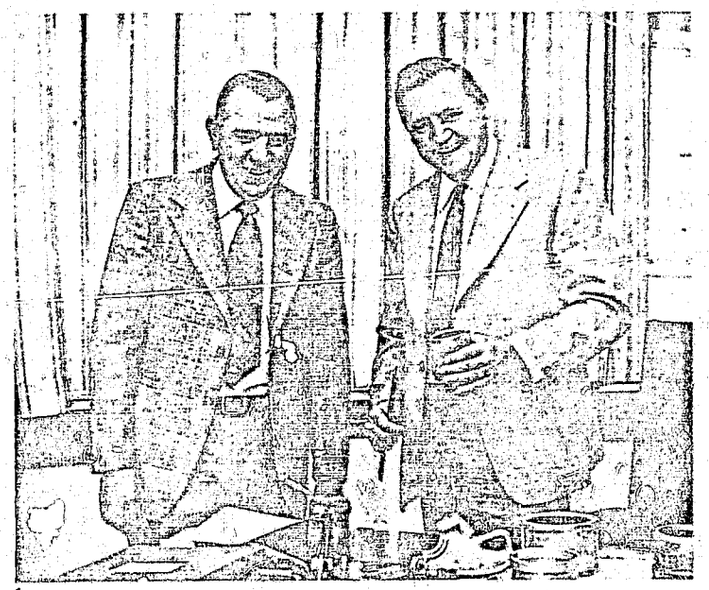

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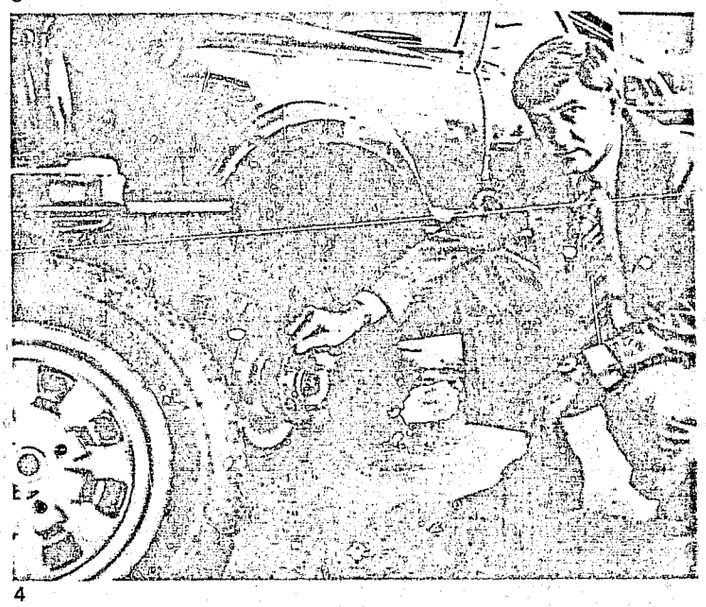

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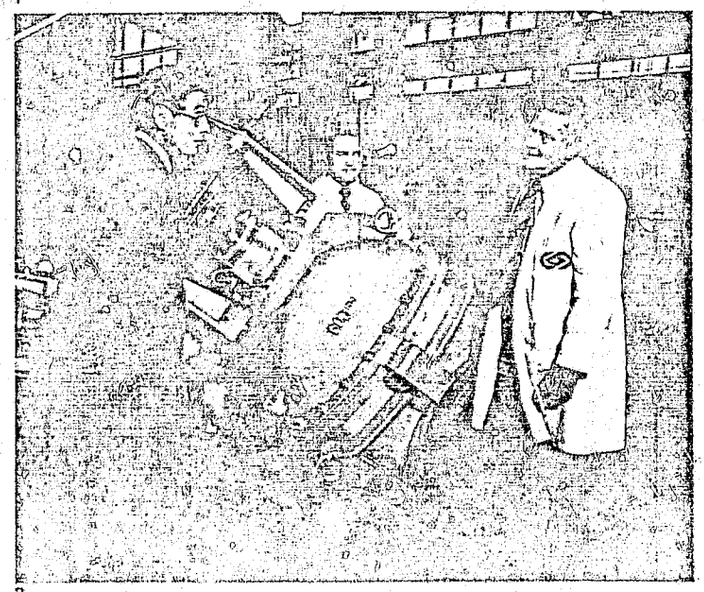

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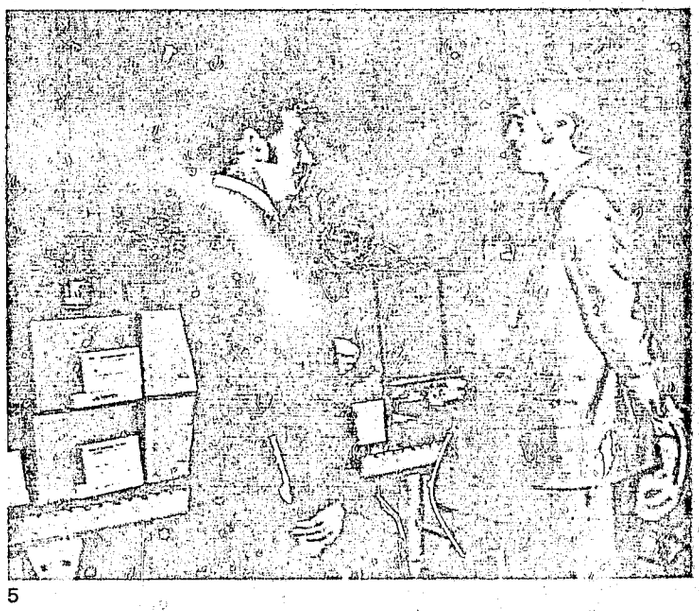

5

Source and application of funds

for the year to 30 September 1977

Bron en aanwending van fondse

vir die jaar tot 30 September 1977

	Company Maatskappy		Group Groep		
	1976 R000	1977 R000	1977 R000	1976 R000	
Source					**Bron**
Funds from operations					Fondse uit bedrywighede
Income before taxation	6 206	4 799	13 903	18 094	Inkomste voor belasting
Taxation	841	180	5 297	6 944	Belasting
Net income	5 365	4 619	8 606	11 150	Netto inkomste
Depreciation	336	239	2 435	2 139	Waardevermindering
Reversal of provision for loss in subsidiary	249	(565)			Terugskrywing van voorsiening vir verlies in filiaal
Capital surplus on disposal of fixed assets	—	(57)	(57)	(13)	Kapitaalsurplus met verkoop van vaste bates
Loss on disposal of subsidiary	—	23			Verlies met verkoop van filiaal
Total funds from operations	5 950	4 259	10 984	13 276	Totale fondse uit bedrywighede
Issue of shares	—	448	448	—	Uitreiking van aandele
Sale of shares in subsidiary	—	134			Die verkoop van aandele in 'n filiaal
Loan portion of taxation	—	10	—	—	Leningsgedeelte van belasting
Capital reserve on acquisition of a subsidiary			45	—	Kapitaalreserwe met verkryging van 'n filiaal
Increase in outside shareholders' interest			500	—	Vermeerdering in buite-aandeelhouersbelang
Amount written off shares in a subsidiary	246	—	—	280	Bedrag afgeskryf van aandele in 'n filiaal
Long term borrowings	2 757	620	750	2 777	Langtermynlenings
Disposal of fixed assets:					Verkoop van vaste bates:
Land and buildings	—	129	128	86	Grond en geboue
Plant and equipment	552	114	166	340	Aanleg en toerusting
	9 505	5 714	13 021	16 759	
Application					**Aanwending**
Purchase of fixed assets:					Aankoop van vaste bates:
Land and buildings	565	184	807	1 453	Grond en geboue
Plant and equipment	153	89	2 909	1 881	Aanleg en toerusting
Investment in subsidiaries:					Belegging in filiale:
Cost of shares	1 922	1 058			Kosprys van aandele
Excess cost			—	229	Koste-oorskot
Currency realignments	—	—	114	11	Valutaherskikkings
Dividends:					Dividende:
Outside shareholders			560	428	Buite-aandeelhouers
Preference	36	36	36	36	Voorkeur
Ordinary	3 827	3 874	3 874	3 827	Gewone
Loan portion of taxation	90	—	569	852	Leningsgedeelte van belasting
Long term borrowings	200	200	425	400	Langtermynlenings
Balance with subsidiaries	4 650	2 075			Saldo by filiale
Working capital	(1 938)	(1 802)	3 727	7 642	Bedryfskapitaal
	9 505	5 714	13 021	16 759	
Increase/(decrease) in working capital:					Vermeerdering/(vermindering) in bedryfskapitaal:
Stock	(109)	(1 593)	802	5 100	Voorraad
Debtors	(1 211)	698	1 848	(1 222)	Debiteure
Cash resources and loans	(224)	(2 493)	4 419	123	Kontantbronne en lenings
Creditors	27	803	(3 361)	2 067	Krediteure
Taxation	(666)	783	19	1 574	Belasting
	(1 938)	(1 802)	3 727	7 642	

Net income	5 365	4 619	8 606	11 150	Netto inkomste
Depreciation	336	239	2 435	2 139	Waardevermindering
Reversal of provision for loss in subsidiary	249	(565)			Terugskrywing van voorsiening vir verlies in filiaal
Capital surplus on disposal of fixed assets	–	(57)	(57)	(13)	Kapitaalsurplus met verkoop van vaste bates
Loss on disposal of subsidiary	–	23			Verlies met verkoop van filiaal
Total funds from operations	5 950	4 259	10 984	13 276	Totale fondse uit bedrywighede
Issue of shares	–	448	448	–	Uitreiking van aandele
Sale of shares in subsidiary	–	134			Die verkoop van aandele in 'n filiaal
Loan portion of taxation	–	10	–	–	Leningsgedeelte van belasting
Capital reserve on acquisition of a subsidiary			45	–	Kapitaalreserwe met verkryging van 'n filiaal
Increase in outside shareholders' interest			500	–	Vermeerdering in buite-aandeelhouersbelang
Amount written off shares in a subsidiary	246	–	–	280	Bedrag afgeskryf van aandele in 'n filiaal
Long term borrowings	2 757	620	750	2 777	Langtermynlenings
Disposal of fixed assets:					Verkoop van vaste bates:
Land and buildings	–	129	128	86	Grond en geboue
Plant and equipment	552	114	166	340	Aanleg en toerusting
	9 505	5 714	13 021	16 759	
Application					**Aanwending**
Purchase of fixed assets:					Aankoop van vaste bates:
Land and buildings	565	184	807	1 453	Grond en geboue
Plant and equipment	153	89	2 909	1 881	Aanleg en toerusting
Investment in subsidiaries:					Belegging in filiale:
Cost of shares	1 922	1 058			Kosprys van aandele
Excess cost			–	229	Koste-oorskot
Currency realignments	–	–	114	11	Valutaherskikkings
Dividends:					Dividende:
Outside shareholders			560	428	Buite-aandeelhouers
Preference	36	36	36	36	Voorkeur
Ordinary	3 827	3 874	3 874	3 827	Gewone
Loan portion of taxation	90	–	569	852	Leningsgedeelte van belasting
Long term borrowings	200	200	425	400	Langtermynlenings
Balance with subsidiaries	4 650	2 075			Saldo by filiale
Working capital	(1 938)	(1 802)	3 727	7 642	Bedryfskapitaal
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Stock	(109)	(1 593)	802	5 100	Voorraad
Debtors	(1 211)	698	1 848	(1 222)	Debiteure
Cash resources and loans	(224)	(2 493)	4 419	123	Kontantbronne en lenings
Creditors	272	803	(3 361)	2 067	Krediteure
Taxation	(666)	783	19	1 574	Belasting
	(1 938)	(1 802)	3 727	7 642	

Income statement

Income statement and
consolidated income statement
for the year to 30 September 1977

Company Maatskappy		Group Groep		Note	
1976 R000	1977 R000	1977 R000	1976 R000		
					Turnover
45 446	42 854	206 030	207 866		Sales to customers
1 318	7 449				Sales to subsidiaries
46 764	50 303	206 030	207 866		
6 206	4 799	13 903	18 094	1	**Income before taxation**
841	180	5 162	7 191	4	**Taxation**
5 365	4 619	8 741	10 903		**Income after taxation**
		771	732		*Less:* Applicable to outside shareholders
36	36	36	36		Preference dividends
5 329	4 583	7 934	10 135		**Earnings attributable to ordinary shareholders**
					Appropriations
					Transfer to distributable reserves:
–	–	7 000	7 000		General reserve – the estimated effect of inflation on net income
					Transfer to non-distributable reserves:
–	57	57	13		Capital surplus arising on the disposal of fixed assets
3 827	3 874	3 874	3 827		Ordinary dividend
1 502	652	(2 997)	(705)		Retained income for the year
7 022	8 524	11 094	11 799		*Add:* Retained income at beginning of the year
8 524	9 176	8 097	11 094		Retained income at end of the year
		35,1	45,0		**Earnings per ordinary share (cents)**
		17,0	17,0		**Dividends per ordinary share (cents)**

Earnings per share is based on earnings attributable to ordinary shareholders' holding 22 603 866 (1976 22 510 533) ordinary shares, being the weighted average number of shares in issue during the year.

1976 R000	1977 R000	1977 R000	1976 R000		
					Turnover
45 446	42 854	206 030	207 866		Sales to customers
1 318	7 449				Sales to subsidiaries
46 764	50 303	206 030	207 866		
6 206	4 799	13 903	18 094	1	Income before taxation
841	180	5 162	7 191	4	Taxation
5 365	4 619	8 741	10 903		Income after taxation
		771	732		*Less:* Applicable to outside shareholders
36	36	36	36		Preference dividends
5 329	4 583	7 934	10 135		Earnings attributable to ordinary shareholders
					Appropriations
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		35,1	45,0		Earnings per ordinary share (cents)
		17,0	17,0		Dividends per ordinary share (cents)

Earnings per share is based on earnings attributable to ordinary shareholders' holding 22 603 866 (1976 22 510 533) ordinary shares, being the weighted average number of shares in issue during the year.

Inkomstestaat

Inkomstestaat en
gekonsolideerde inkomstestaat
vir die jaar tot 30 September 1977

Aantekening		
	Omset	
	Verkope aan klante	
	Verkope aan filiale	
1	Inkomste voor belasting	
4	Belasting	
	Inkomste na belasting	
	Min: Toedeelbaar aan buite-aandeelhouers	
	Voorkeurdividende	
	Verdienste toedeelbaar aan gewone aandeelhouers	
	Aanwendings	
	Oordrag na verdeelbare reserwes:	
	Algemene reserwe—die geraamde uitwerking van inflasie op netto inkomste	
	Oordrag na nie-verdeelbare reserwes:	
	Kapitaalsurplus voortspruitend uit die verkoop van vaste bates	
	Gewone dividend	
	Teruggehoue inkomste vir die jaar	
	Plus: Teruggehoue inkomste aan begin van die jaar	
	Teruggehoue inkomste aan einde van die jaar	
	Verdienste per gewone aandeel (sent)	
	Dividende per gewone aandeel (sent)	
	Verdienste per aandeel word gebaseer op verdienste toedeelbaar aan gewone aandeelhouers wat 22 603 866 (1976 22 510 533) gewone aandele besit, synde die berekende gemiddelde getal aandele gedurende die jaar uitgereik	

Balansstaat

Balansstaat en gekonsolideerde balansstaat op
30 September 1977

	Aantekening
Kapitaal aangewend	
Gewone kapitaal	5
Aandelepremie—netto	6
Nie-verdeelbare reserwes	7
Verdeelbare reserwes	7
Gewone aandeelhouersfondse	
Voorkeurkapitaal	5
Buite-aandeelhouersbelang	
Langtermynlenings	8
Bedrag opsy gesit vir uitgestelde belasting	
Totale kapitaal aangewend	
Aanwending van kapitaal	
Vaste bates	10
Beleggings	12
Filiale	13
Leningsgedeelte van belasting	
Bedryfsbates	
Voorraad	14
Belasting oorbetaal	
Debiteure	
Bedrae verskuldig deur medefiliale	
Korttermyndeposito's en lenings	
Saldo's by bankiers en kontant	
Totale bedryfsbates	
Bedryfslaste	
Belasting	
Krediteure	
Bedrae verskuldig aan medefiliale	
Dividend op gewone aandele	
Totale bedryfslaste	
Netto bedryfsbates	
Totale aanwending van kapitaal	

		Aantekening
	Omset	
	Verkope aan klante	
	Verkope aan filiale	
1	Inkomste voor belasting	
4	Belasting	
	Inkomste na belasting	
	Min: Toedeelbaar aan buite-aandeelhouers	
	Voorkeurdividende	
	Verdienste toedeelbaar aan gewone aandeelhouers	
	Aanwerdings	
	Oordrag na verdeelbare reserwes:	
	Algemene reserwe—die geraamde uitwerking van inflasie op netto inkomste	
	Oordrag na nie-verdeelbare reserwes:	
	Kapitaalsurplus voortspruitend uit die verkoop van vaste bates	
	Gewone dividend	
	Teruggehoue inkomste vir die jaar	
	Plus: Teruggehoue inkomste aan begin van die jaar	
	Teruggehoue inkomste aan einde van die jaar	
	Verdienste per gewone aandeel (sent)	
	Dividende per gewone aandeel (sent)	
	Verdienste per aandeel word gebaseer op verdienste toedeelbaar aan gewone aandeelhouers wat 22 603 866 (1976 22 510 533) gewone aandele besit, synde die bestwaarde gemiddelde getal aandele gedurende die jaar uitgereik	

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Bedryfsbates	
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Belasting oorbetaal	
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Totale bedryfsbates	
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Belasting	
Krediteure	
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Dividend op gewone aandele	
Totale bedryfslaste	
Netto bedryfsbates	
Totale aanwending van kapitaal	

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me statement
September 1977

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table to ordinary

table reserves:
he estimated effect of inflation

tributable reserves:
ing on the disposal of fixed

the year
me at beginning of the year

end of the year

nary share (cents)
linary share (cents)

s based on earnings attributable
lders' holding 22 603 866
ordinary shares, being the
umber of shares in issue

Balance sheet and consolidated balance sheet at
30 September 1977

	Note
Capital employed	
Ordinary capital	5
Share premium – net	6
Non-distributable reserves	7
Distributable reserves	7
Ordinary shareholders' funds	
Preference capital	5
Outside shareholders' interest	
Long term borrowings	8
Amount set aside for deferred taxation	
Total capital employed	
Employment of capital	
Fixed assets	10
Investments	12
Subsidiaries	13
Loan portion of taxation	
Current assets	
Stock	14
Taxation overpaid	
Debtors	
Amounts owing by fellow subsidiaries	
Short term deposits and loans	
Balances with bankers and cash	
Total current assets	
Current liabilities	
Taxation	
Creditors	
Amounts owing to fellow subsidiaries	
Dividend on ordinary shares	
Total current liabilities	
Net current assets	
Total employment of capital	

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Current liabilities	
Taxation	
Creditors	
Amounts owing to fellow subsidiaries	
Dividend on ordinary shares	
Total current liabilities	
Net current assets	
Total employment of capital	

Balansstaat

Balansstaat en gekonsolideerde balansstaat op
30 September 1977

	Aantekening	Company Maatskappy		Group Groep	
		1976 R000	1977 R000	1977 R000	1976 R000
Kapitaal aangewend					
Gewone kapitaal	5	11 255	11 395	11 395	11 255
Aandelepremie – netto	6	14 210	14 518	8 197	7 831
Nie-verdeelbare reserwes	7	1 442	1 499	5 811	4 174
Verdeelbare reserwes	7	28 285	28 937	54 298	50 495
Gewone aandeelhouersfondse		55 192	56 349	79 701	73 755
Voorkeurkapitaal	5	600	600	600	600
Buite-aandeelhouersbelang				5 750	4 819
Langtermynlenings	8	29 780	30 200	30 906	30 581
Bedrag opsy gesit vir uitgestelde belasting		–	–	799	538
Totale kapitaal aangewend		85 572	87 149	117 756	110 293
Aanwending van kapitaal					
Vaste bates	10	5 090	4 938	28 160	24 993
Beleggings	12	–	–	99	99
Filiale	13	62 079	65 620		
Leningsgedeelte van belasting		176	166	2 494	1 925
Bedryfsbates					
Voorraad	14	7 437	5 844	57 220	56 418
Belasting oorbetaal		–	–	37	746
Debiteure		7 812	8 474	37 615	35 737
Bedrae verskuldig deur medefiliale		36	72	420	450
Korttermyndeposito's en lenings		8 656	6 024	14 523	11 338
Saldo's by bankiers en kontant		3 610	3 749	5 560	4 326
Totale bedryfsbates		27 551	24 163	115 375	109 015
Bedryfslaste					
Belasting		1 006	223	3 070	3 798
Krediteure		4 491	3 615	21 300	18 068
Bedrae verskuldig aan medefiliale		–	26	128	46
Dividend op gewone aandele		3 827	3 874	3 874	3 827
Totale bedryfslaste		9 324	7 738	28 372	25 739
Netto bedryfsbates		18 227	16 425	87 003	83 276
Totale aanwending van kapitaal		85 572	87 149	117 756	110 293

		R000	R000	R000	R000
Kapitaal aangewend					
Gewone kapitaal	5	11 255	11 395	11 395	11 255
Aandelepremie – netto	6	14 210	14 518	8 197	7 831
Nie-verdeelbare reserwes	7	1 442	1 499	5 811	4 174
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Gewone aandeelhouersfondse		55 192	56 349	79 701	73 755
Voorkeurkapitaal	5	600	600	600	600
Buite-aandeelhouersbelang				5 750	4 819
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Totale aanwending van kapitaal		85 572	87 149	117 756	110 293

Notes on the financial statements

for the year to 30 September 1977

Aantekeninge by die finansiële state

vir die jaar tot 30 September 1977

Comparative figures
Certain figures relating to 1976 have been restated in order to reflect an appropriate comparison.

Vergelykende syfers
Sekere syfers t.o.v. 1976 is hergetoon ten einde 'n toepaslike vergelyking weer te gee.

	Company Maatskappy		Group Groep		
	1976 R000	1977 R000	1977 R000	1976 R000	
1 Income before taxation					**Inkomste voor belasting**
Income before taxation has been arrived at after including:					Inkomste voor belasting is bereken na insluiting van:
Income from subsidiaries					Inkomste uit filiale
Dividends	4 854	4 222			Dividende
Administration fees	3 021	3 327			Administrasiegelde
Interest	1 781	1 903			Rente
Other interest received	846	1 038	1 460	1 087	Ander rente ontvang
Income from unlisted investments	—	—	157	161	Inkomste uit ongenoteerde beleggings
Capital surplus on disposal of fixed assets	—	57	57	13	Kapitaalsurplus met verkoop van vaste bates
Reversal of provision for loss in subsidiaries	—	565			Terugskrywing van voorsiening vir verlies in filiale
and after charging:					en na debitering van:
Interest on long term borrowings	3 178	3 435	3 504	3 223	Rente op langtermynlenings
Other interest paid	124	104	204	251	Ander rente betaal
Depreciation	336	239	2 435	2 139	Waardevermindering
Leasing charges: Plant and equipment	707	753	2 150	1 921	Bruikhuurkoste: Aanleg en toerusting
Technical and secretarial fees	78	138	383	286	Tegniese en sekretariële gelde
Provision for loss in subsidiaries	249	—			Voorsiening vir verlies in filiale
Writing down investment in a subsidiary	246	—	—	280	Afskrywing van belegging in 'n filiaal
Loss on disposal of a subsidiary	—	23	36	—	Verlies met verkoop van 'n filiaal
2 Auditors' remuneration					**Ouditeursvergoeding**
Audit fees, including under provisions in prior years	57	61	281	275	Ouditgelde, met inbegrip van ondervoorsienings in vorige jare
Other fees	—	—	7	3	Ander gelde
Expenses	—	—	1	2	Onkoste
	57	61	289	280	
3 Directors' emoluments					**Direkteursvergoeding**
Emoluments:					Besoldiging:
For services as directors	56	53			Vir dienste as direkteure
For other services	210	279			Vir ander dienste
Pensions:					Pensioene:
For other services	37	47			Vir ander dienste

1 Income before taxation / Inkomste voor belasting

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Loss on disposal of a subsidiary	—	23	36	—	Verlies met verkoop van 'n filiaal

2 Auditors' remuneration / Ouditeursvergoeding

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Expenses	—	—	1	2	Onkoste
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3 Directors' emoluments / Direkteursvergoeding

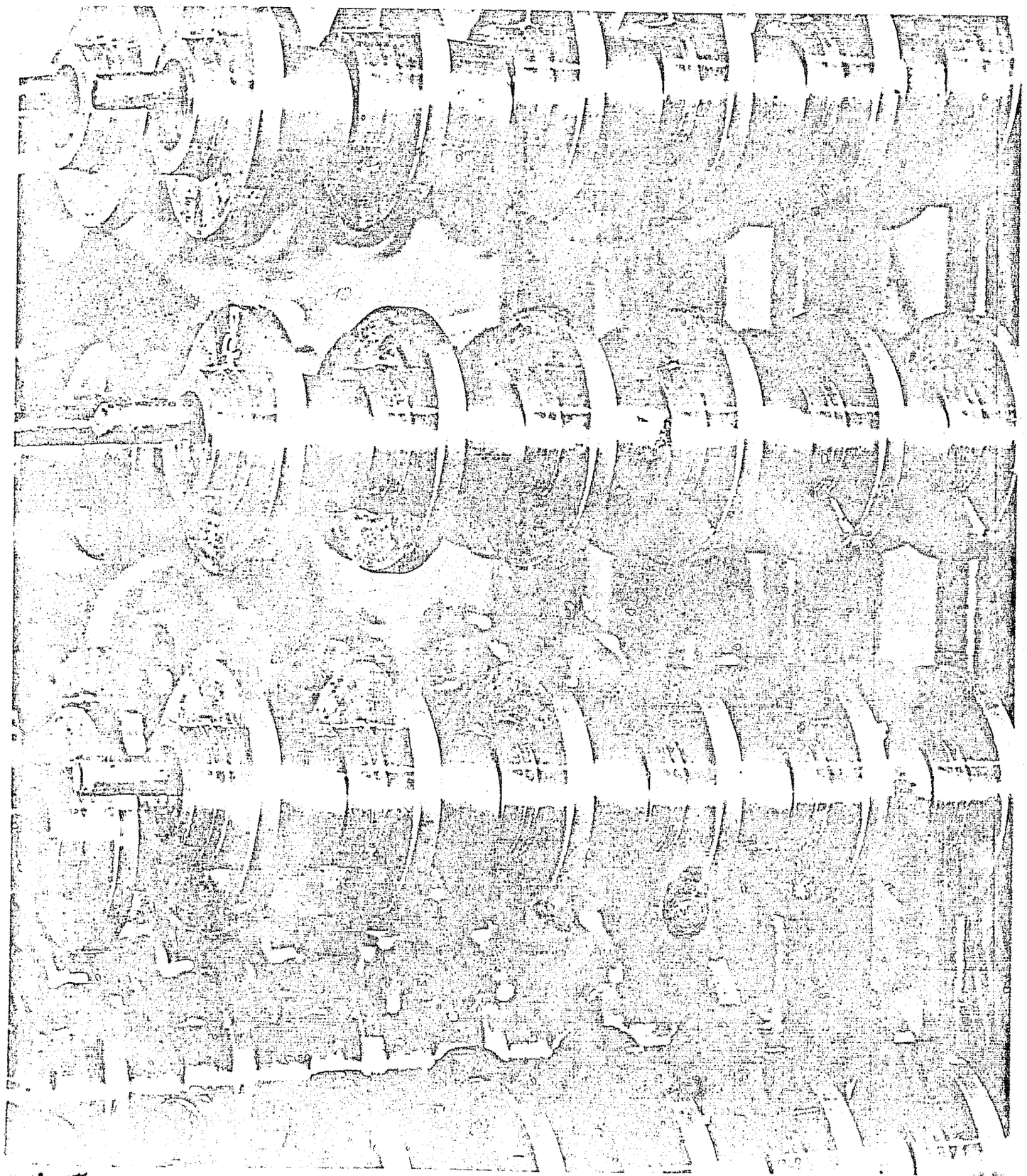
Emoluments:					Besoldiging:
For services as directors	56	53			Vir dienste as direkteure
For other services	210	279			Vir ander dienste
Pensions:					Pensioene:
For other services	37	47			Vir ander dienste

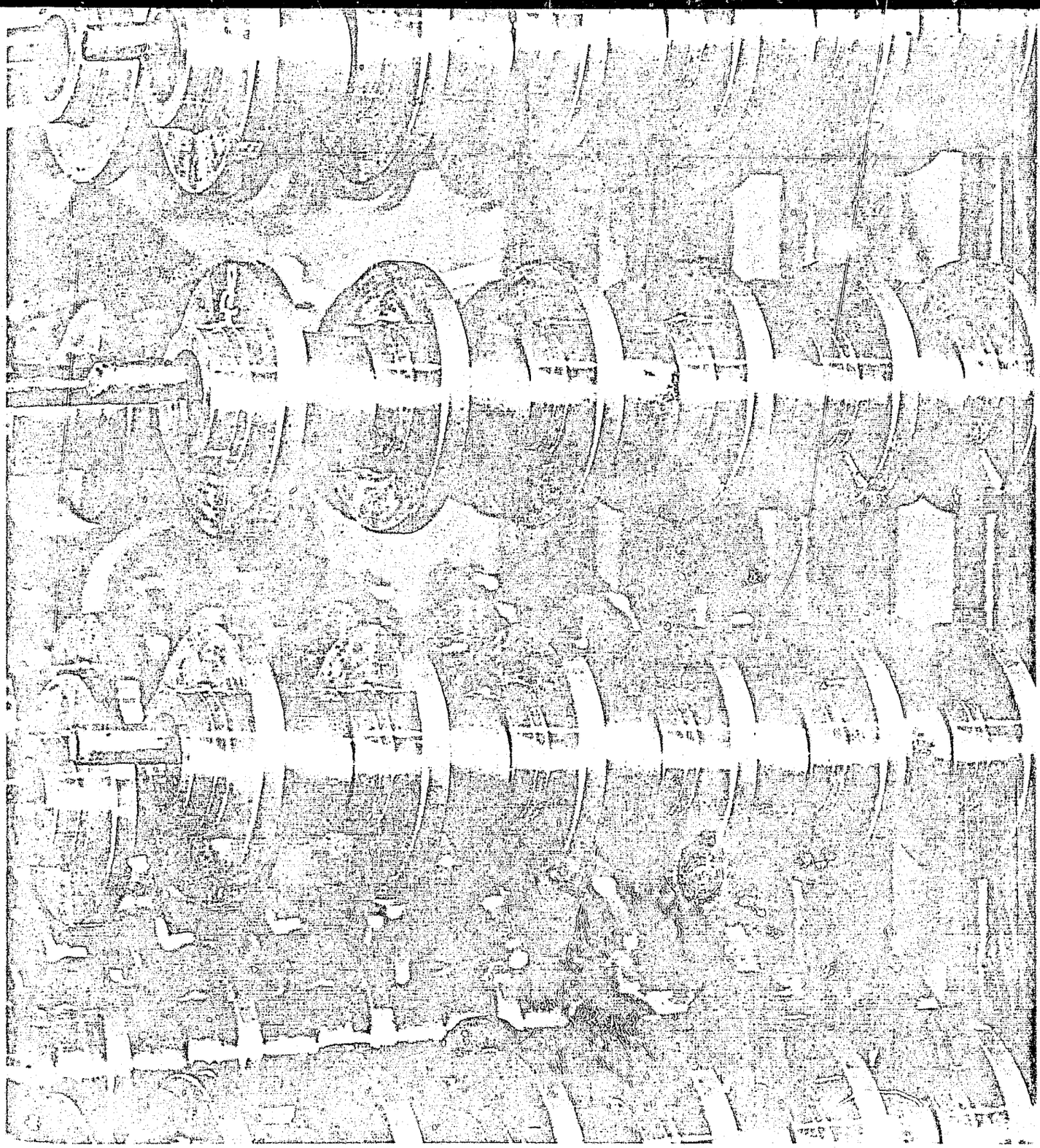
	Company Maatskappy		Group Groep		
	1976 R000	1977 R000	1977 R000	1976 R000	
Long term borrowings					**Langtermynlenings**
Interest rate % / Redemption period					Rente-koers % / Aflossings-termyn
Loan stock					Leningseffekte
6,75 1977/1985	—	—	272	305	6,75 1977/1985
Unsecured loan stock					Onversekerde leningseffekte
7,5 1977/1984	1 600	1 400	1 400	1 600	7,5 1977/1984
Unsecured debentures					Onversekerde skuldbriewe
9,2 1984/1998	10 000	10 000	10 000	10 000	9,2 1984/1998
10,25 1982/1991	3 000	3 000	3 000	3 000	10,25 1982/1991
11,75 1986/1995	3 491	3 491	3 491	3 491	11,75 1986/1995
13,75 1986/1995	4 509	4 509	4 509	4 509	13,75 1986/1995
13,375 1988/1996	5 013	5 395	5 395	5 013	13,375 1988/1996
13,125 1982/1985	2 367	2 605	2 605	2 367	13,125 1982/1985
Loans					Lenings
7,0 1977/1980	—	—	296	377	7,0 1977/1980
3,0 1977/1981	—	—	15	18	3,0 1977/1981
5,5 1977/1980	—	—	150	200	5,5 1977/1980
10,5 1977/1981	—	—	87	103	10,5 1977/1981
Hire purchase creditor (Note 10)					Huurkoopkrediteur (Aantekening 10)
14,0 1977/1981	—	—	130	—	14,0 1977/1981
	29 980	30 400	31 350	30 983	
Less: repayments due; year ending 30 September 1978 included in creditors	200	200	444	402	*Min:* terugbetalings betaalbaar; jaar eindigende 30 September 1978 ingesluit by krediteure

Schedule of repayments of long term borrowings		**Tabel van terugbetalings van langtermynlenings**
Year ending 30 September 1979	444	Jaar eindigende 30 September 1979
Year ending 30 September 1980	443	Jaar eindigende 30 September 1980
Year ending 30 September 1981	275	Jaar eindigende 30 September 1981
Year ending 30 September 1982	1 055	Jaar eindigende 30 September 1982
Year ending 30 September 1983	1 054	Jaar eindigende 30 September 1983
5 Years ending 30 September 1988	9 613	5 Jaar eindigende 30 September 1988
5 Years ending 30 September 1993	10 931	5 Jaar eindigende 30 September 1993
5 Years ending 30 September 1998	7 091	5 Jaar eindigende 30 September 1998

Contingent liabilities					**Voorwaardelike aanspreeklikhede**
Commercial contract and other guarantees	—	5	175	246	Handelskontrak en ander waarborge
Guarantees for housing loans from building societies and others to employees	570	592	639	613	Waarborge vir huislenings aan werknemers deur bouverenigings en andere
Guarantees of bank overdrafts of subsidiaries	176	30			Waarborge vir bankoortrekkings van filiale
	746	627	814	859	

Malleable iron front wheel automobile hubs
Voorwielmotornawe van smeebare yster

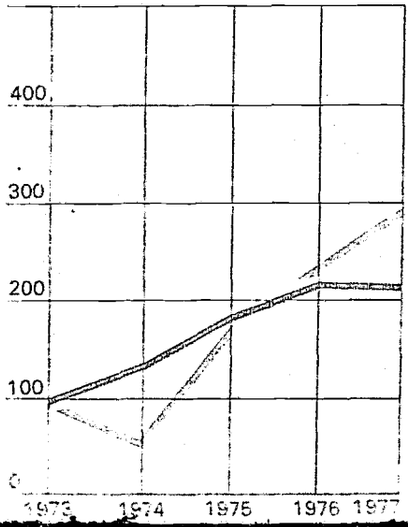




PF Joubert
Executive director
Uitvoerende direkteur

A Ferreira
Personnel manager
Personeelbestuurder

HB Redmayne
Accountant
Rekenmeester



Relative movement of sales and income from a common base of 100 in 1973

Betreklike wisseling van afset en inkomste vanaf 'n gemeenskaplike basis van 100 in 1973

Manufactured Products Division

The Manufactured Products Division had a successful year as a total portfolio. There were, however, considerable variations in performance among companies within the division, due to the wide variety of markets served.

Those units having their major activities in the agricultural market reflected the buoyant state of this sector. They were Salister Diesels (Pty) Limited, and the Windmills Division. Salweir (Pty) Limited also benefited from this sector, but to a lesser extent.

Salister Diesels is a new company, formed during the year to handle the manufacture and distribution of Lister diesel engines in South Africa. Stewarts & Lloyds have for many years been the agent in Southern Africa for RA Lister & Company, of Gloucestershire. The new company, which has access to Lister technology, will aim towards increasing the local content of Lister engines assembled here. It is in the process of moving to its own premises in Vereeniging, from the site it at present occupies.

Salweir, whose factory is at Benoni, not only finds end uses for its pumps in agriculture, but has been able to secure valuable contracts in quasi-Government projects, including Matla and Zuikerbosch power stations. Greater local production is being developed. Know-how and expertise is available from Weir Pumps Limited, Scotland.

Windmills have been synonymous with Stewarts & Lloyds since the early part of the century and in the past year there has been a sudden revival of interest in them, possibly due to increasing fuel costs.

JK Fulton (Pty) Limited, which operates from a factory in Wadeville, is best known as a manufacturer of hoists, winches and sluice gates. In addition to this activity, the company is now distributing sophisticated machinery for use underground in mines. Two major agencies have been acquired – FMC Corporation, an American manufacturer of mechanised mining equipment, and L'Equipement Minier of France, with a range of load-haul-dump machines.

Fultons has had some success during the year in exports and it is felt that an overseas market for hoists and small sluice gates can be further developed.

The name of JH Vivian Mining Co (Pty) Limited, whose plant is in Benoni, has been changed to Salchain (Pty) Limited, as it is today primarily a manufacturer of chain. The name change has been accompanied by a new marketing strategy, which it is hoped will show results in the coming year.

Vivian-Colt (Pty) Limited, manufacturers of ventilation systems and sheet metal products, whose factory is at Aeroton, Johannesburg, continues to suffer from the recession in the building industry and the reluctance of South African management to install ventilation systems in factories. It is, however, diversifying successfully. The first dust extractor made by the company has been installed in a coal mine. A Colt louvre system, which prevents water entry but admits air, has been adopted to protect television

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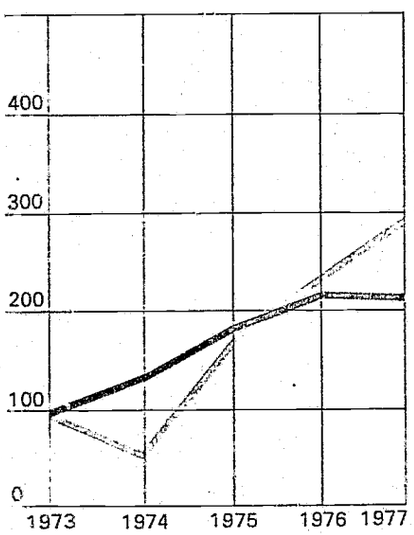


Relative movement of sales and income from a common base of 100 in 1973

Betreklike wisseling van afset en inkomste vanaf 'n gemeenskaplike basis van 100 in 1973

Conveyor chain, manufactured by Salchain (Pty) Ltd, in use at a Natal sugar mill. The sugar industry is an important market for the company.

Vervoerketting, vervaardig deur Salchain (Pty) Ltd, in gebruik by 'n suikerfabriek in Natal. Die suikernywerheid is 'n belangrike mark vir die maatskappy.

Afdeling Vervaardigde Produkte

As 'n totale portefeulje, het die Afdeling Vervaardigde Produkte 'n suksesvolle jaar gehad. Daar was egter aansienlike wisseling in prestasie onder die maatskappye binne die afdeling vanwe die groot verskeidenheid markte wat voorsien word.

Die eenhede wat hulle hoofbedrywighede in die landboumark het, het die florerende toestand van hierdie sektor weerspieël. Hulle was Salister Diesels (Pty) Limited en die Windpompafdeling. Salweir (Pty) Limited is ook deur hierdie sektor bevoordeel, maar in 'n kleiner mate.

Salister Diesels is 'n nuwe maatskappy wat gedurende die jaar gestig is om die vervaardiging en verspreiding van Lister-dieselenjins in Suid-Afrika te behartig. Stewarts & Lloyds is al jare lank die agent in Suidelike Afrika vir RA Lister & Company van Gloucestershire. Die nuwe maatskappy wat toegang het tot Lister-tegnologie, sal daarna streef om die plaaslike inhoud van Lister-enjins wat hier monteer word, te vergroot. Die maatskappy is op die oomblik besig om na sy eie perseel in Vereeniging te verskuif vanaf sy huidige terrein.

Salweir wat sy fabriek by Benoni het, vind nie net eindgebruik vir sy pompe in die landbou nie, maar het daarin geslaag om waardevolle kontrakte in kwasi-Regerings-projekte te verkry, met inbegrip van die Matla- en die Zuikerbosch-kragstasie. Groter plaaslike produksie word ontwikkel. Bedryfskennis en deskundigheid is by Weir Pumps Limited, in Skotland bekombaar.

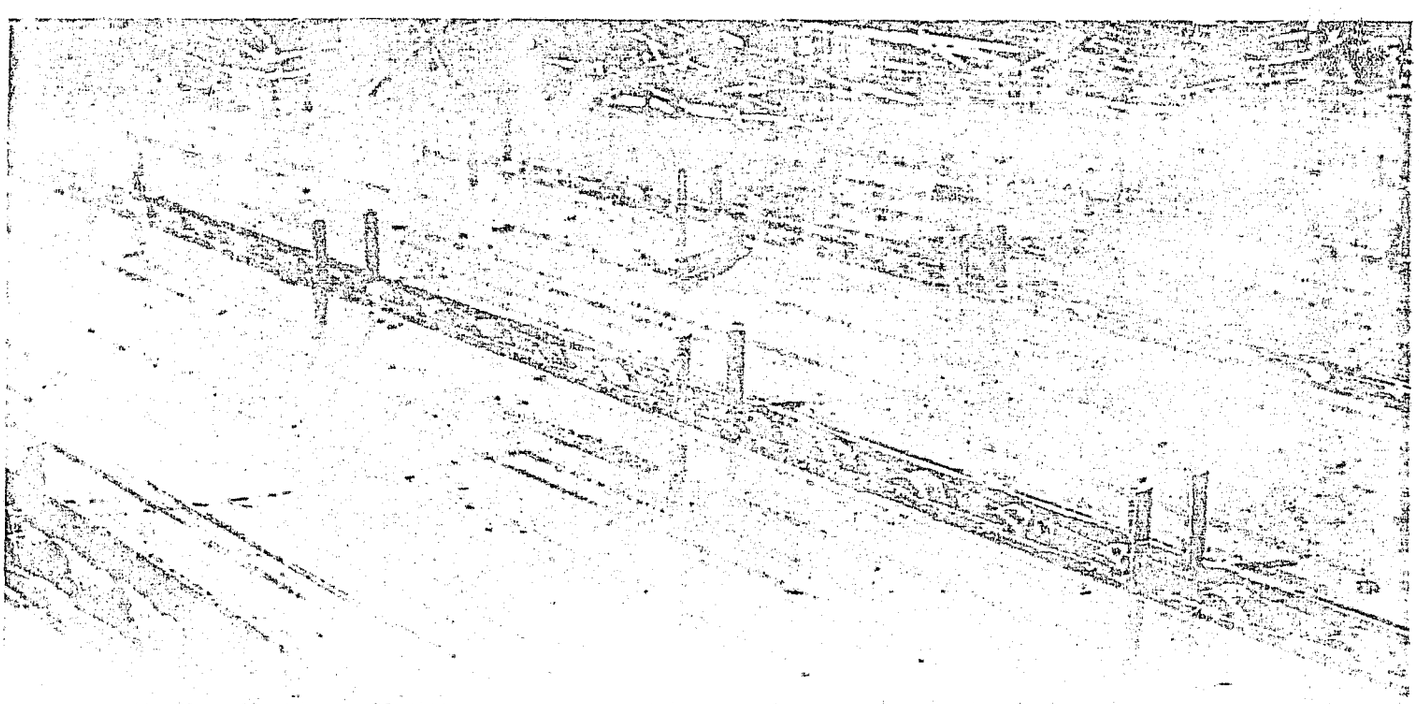
Sedert die vroeë jare van die eeu is windpompe sinoniem met Stewarts & Lloyds en gedurende die afgelope jaar is belangstelling skielik weer in hulle getoon, moontlik weens stygende brandstofkoste.

JK Fulton (Pty) Limited wat 'n fabriek in Wadeville het, is meestal bekend as 'n vervaardiger van hysers, wenasse en sluishekke. Benewens hierdie bedrywigheid versprei die maatskappy nou gesofistikeerde masjinerie vir ondergrondse gebruik in myne. Twee belangrike agentskappe is verkry – FMC Corporation, 'n Amerikaanse vervaardiger van gemeganiseerde myntoerusting, en L'Equipement Minier van Frankryk, met 'n verskeidenheid laai-trek-stortmasjiene.

Fultons het gedurende die jaar 'n mate van sukses behaal met uitvoere en daar word vermoed dat 'n buitelandse mark vir hysers en klein sluishekke verder ontwikkel kan word.

Die naam JH Vivian Mining Co (Pty) Limited, wat sy aanleg in Benoni het, is verander in Salchain (Pty) Limited, aangesien die maatskappy tans hoofsaaklik 'n kettingvervaardiger is. Die naamsverandering gaan gepaard met 'n nuwe bemarking-strategie wat hopelik resultate in die komende jaar sal toon.

Vivian-Colt (Pty) Limited, vervaardigers van belugtingstelsels en plaatmetaalprodukte, met hulle fabriek in Aeroton, Johannesburg, ly nog steeds onder die resessie in die boubedryf, asook die onwilligheid van Suid-Afrikaanse bestuur om belugtingstelsels in fabrieke te installeer. Die maatskappy is egter besig om met welslae te diversifiseer. Die eerste stofvanger deur die maatskappy vervaardig, is in 'n steenkoolmyn geïnstalleer. 'n Colt-hortjiestelsel wat water-inlating voorkom, maar wat lug inlaat, is in gebruik om televisiesenders in verskillende dele van die land te beskerm.



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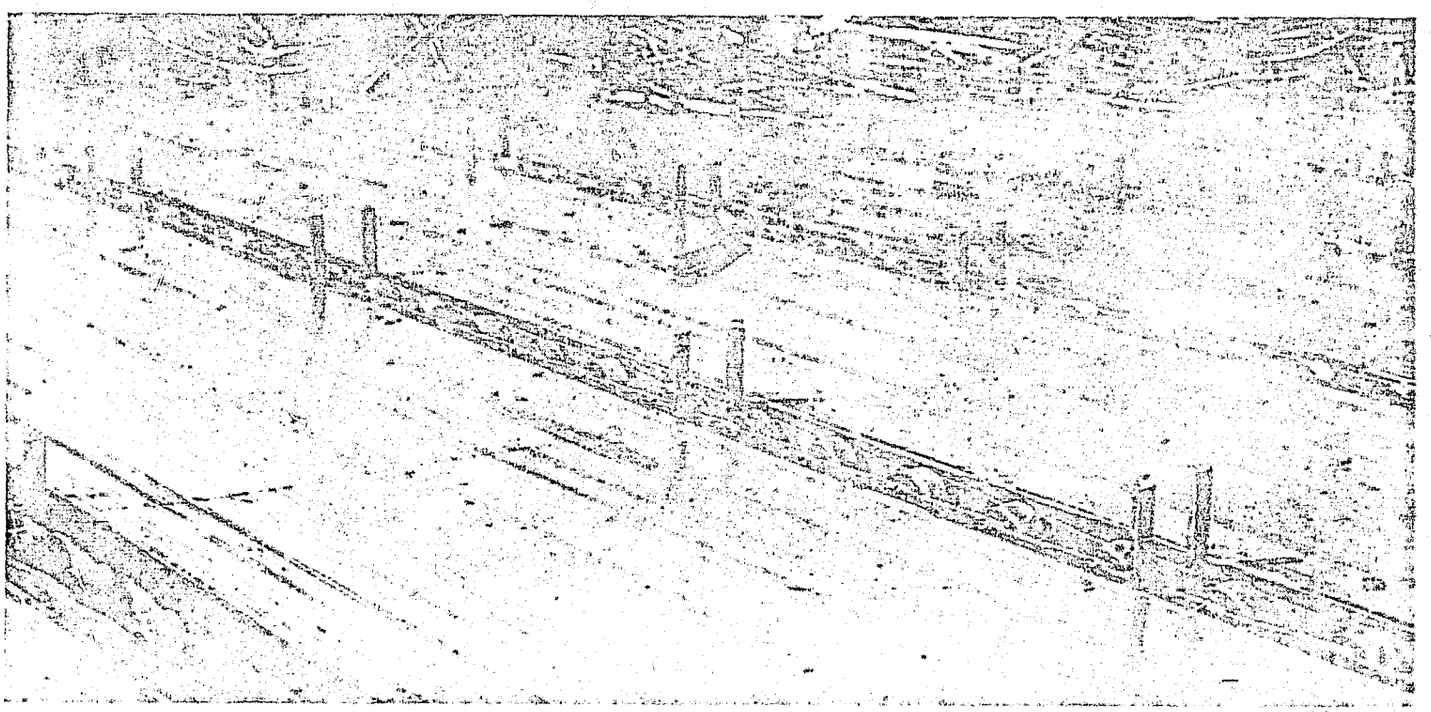


1 A McGugan, general manager and JK Gilday, production manager of Salister Diesels (Pty) Ltd.
2 A Lister diesel engine, assembled in Vereeniging, is unloaded in a rural setting near to Blantyre, in Malawi.

1 A McGugan, algemene bestuurder en JK Gilday, produksiebestuurder van Salister Diesels (Pty) Ltd.
2 'n Lister-dieselenjin, in Vereeniging gemonteer, word teen 'n plattelandse agtergrond naby Blantyre in Malawi afgeloai.

3 G Louwrens, general manager of Salweir (Pty) Ltd, studying the new BE 'back pull-out' type of pump.
4 K Gilday, manager of Windmill Division, with a model of the 104 hand pump.

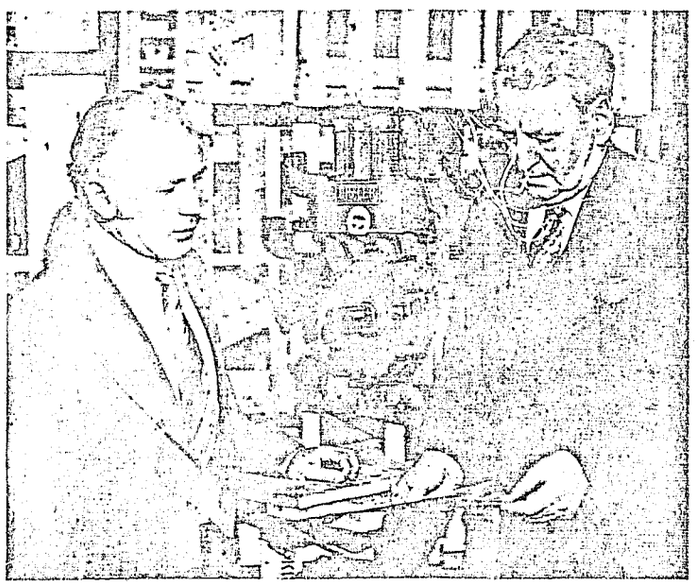
3 G Louwrens, algemene bestuurder van Salweir (Pty) Ltd, bestudeer die nuwe BE-'agteruittrek'-tipe pomp.
4 K Gilday, bestuurder van die Windpompafdeling, met 'n model van die 104-handpomp.

The group acquired the entire shareholding of Koolmaster Manufacturing (Pty) Limited, of Pretoria, during 1976. Koolmaster is a major manufacturer of components for domestic and industrial refrigeration and domestic air conditioning. It is a profitable investment, headed by RH Kieser, who was the chief executive at the time of the acquisition.

The depressed results of the Weiser Lock Co (SA) (Pty) Limited, with an assembly plant in Johannesburg, reflected the state of the building industry. Weiser Lock systems depend mainly on the development of blocks of flats and offices for new business. There is a steady replacement activity but insufficient to stretch the capabilities of the company.

Die groep het gedurende 1976 die totale aandelebesit van Koolmaster Manufacturing (Pty) Limited van Pretoria verkry. Koolmaster is 'n belangrike vervaardiger van onderdele vir huishoudelike- en nywerheidsverkoelingseenhede en vir huishoudelike lugversorging. Dit is 'n winsgewende belegging onder leiding van RH Kieser wat die hoofuitvoerende beampte was ten tye van die verkryging.

Die verlaagde resultate van die Weiser Lock Co (SA) (Pty) Limited, wat 'n monteerinstallasie in Johannesburg het, was 'n weerspieëling van die toestand van die boubedryf. Weiser Lock-stelsels maak grotendeels staat op die ontwikkeling van woonstel- en kantoorgeboue vir nuwe besigheid. Daar is 'n bestendige vervangingsbedrywigheid, maar dit is ontoereikend om die vermoë van die maatskappy ten volle te benut.



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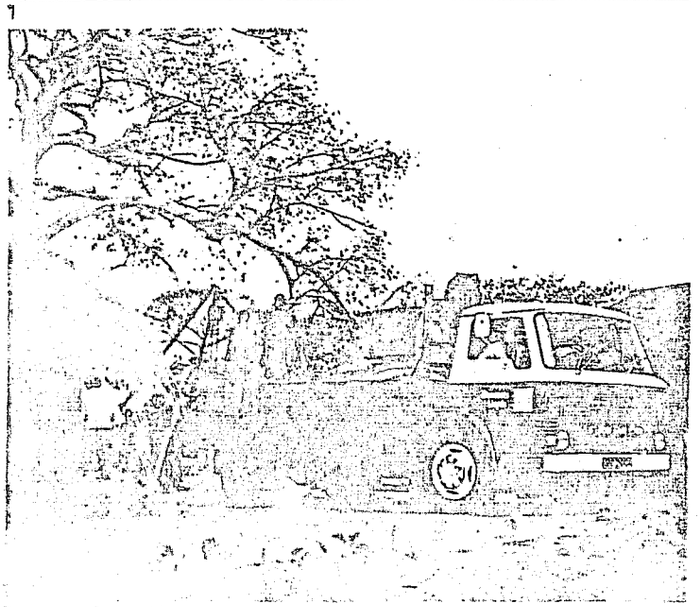

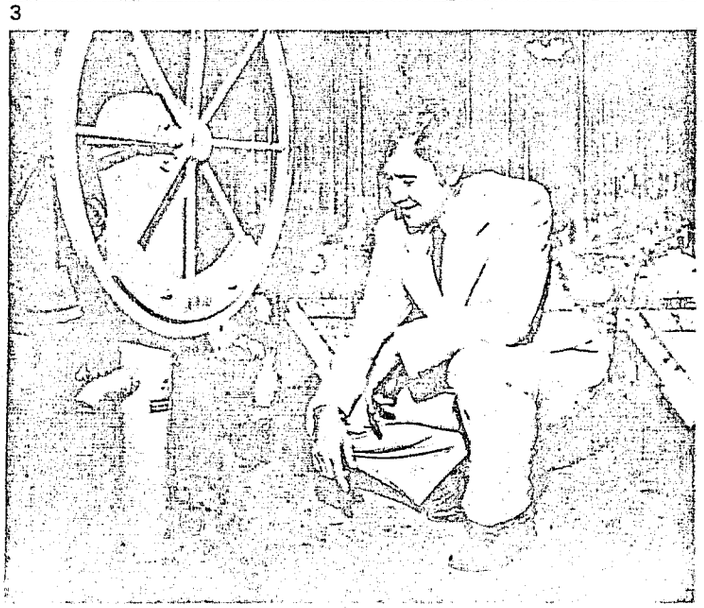

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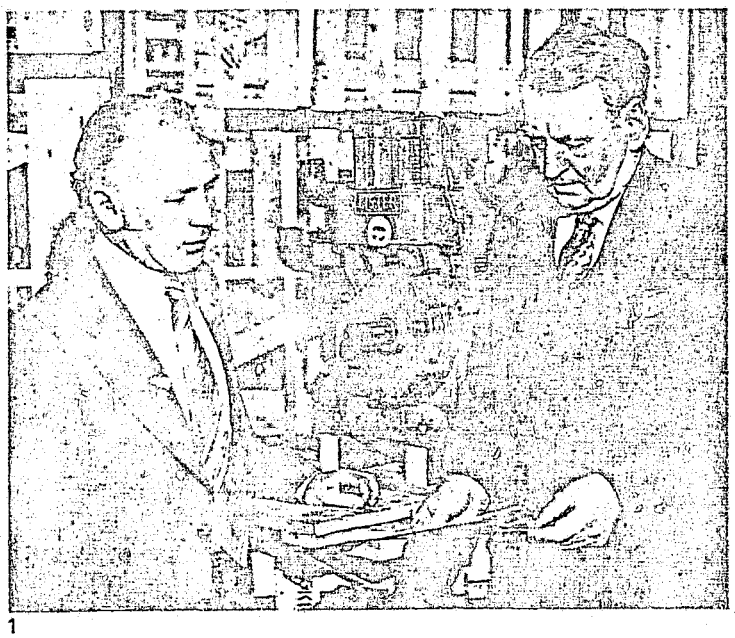

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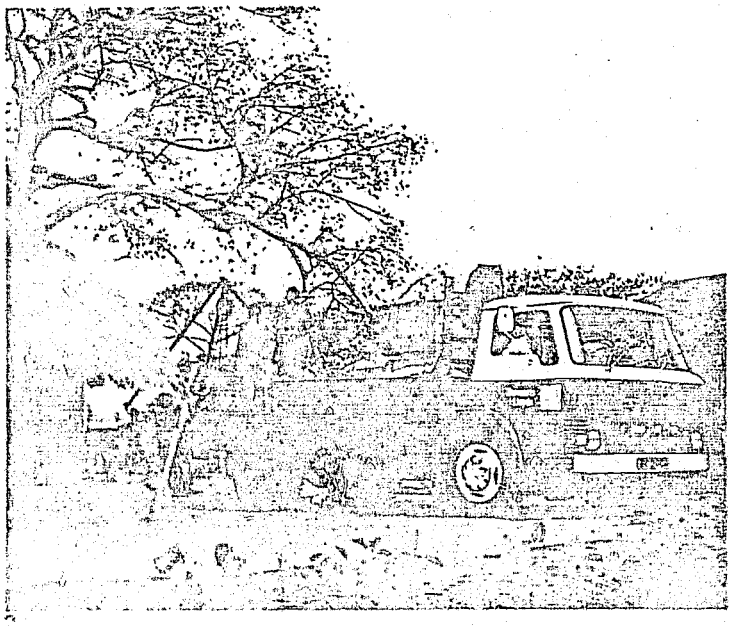
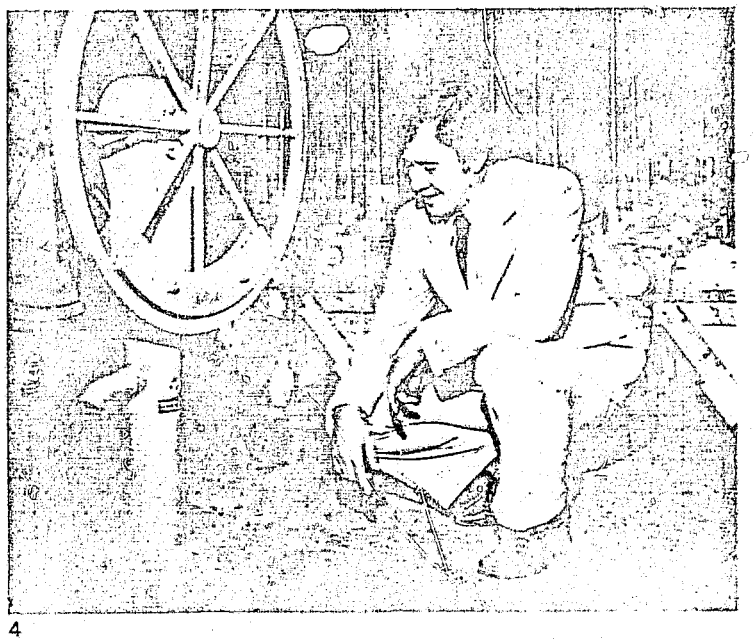
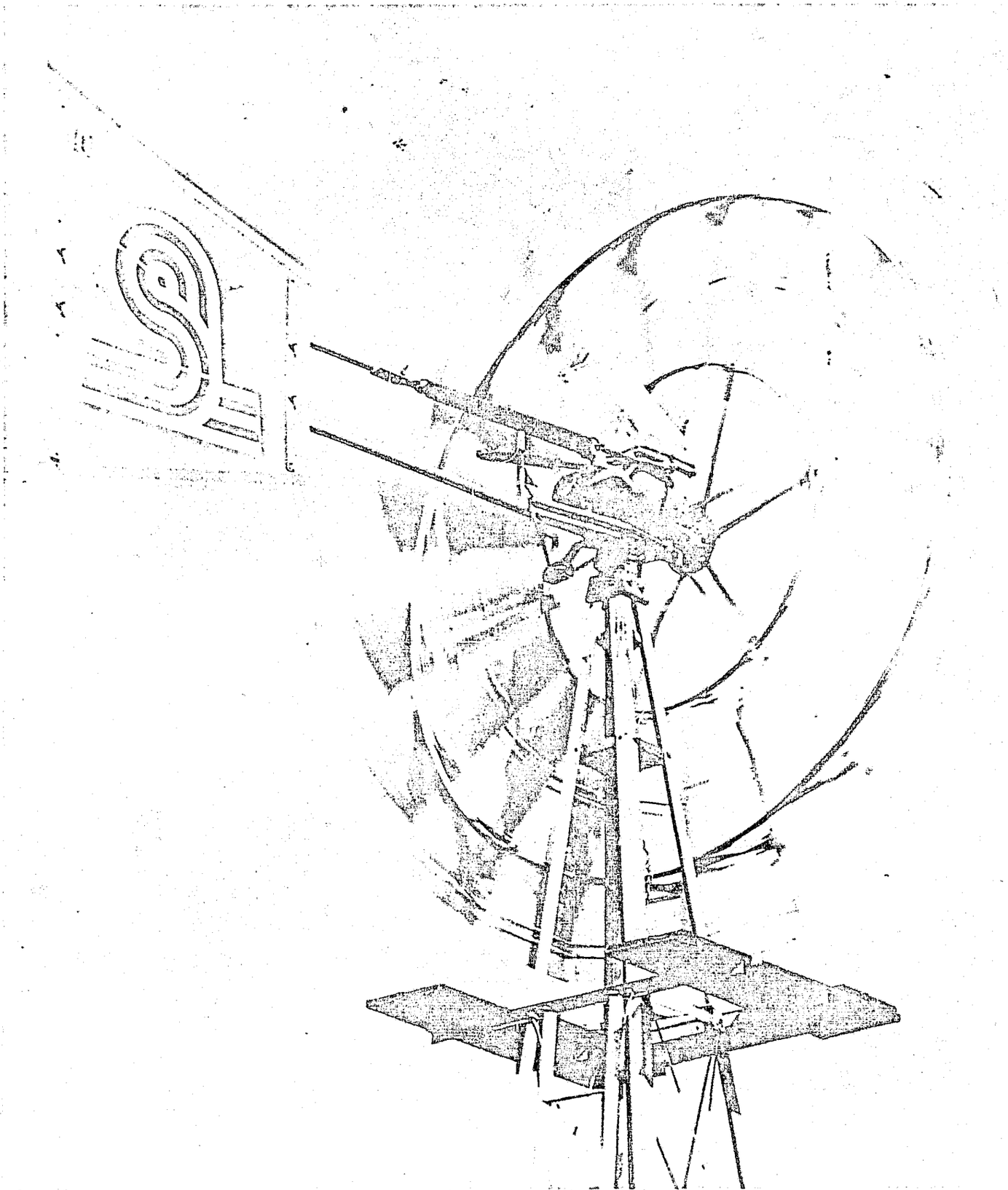


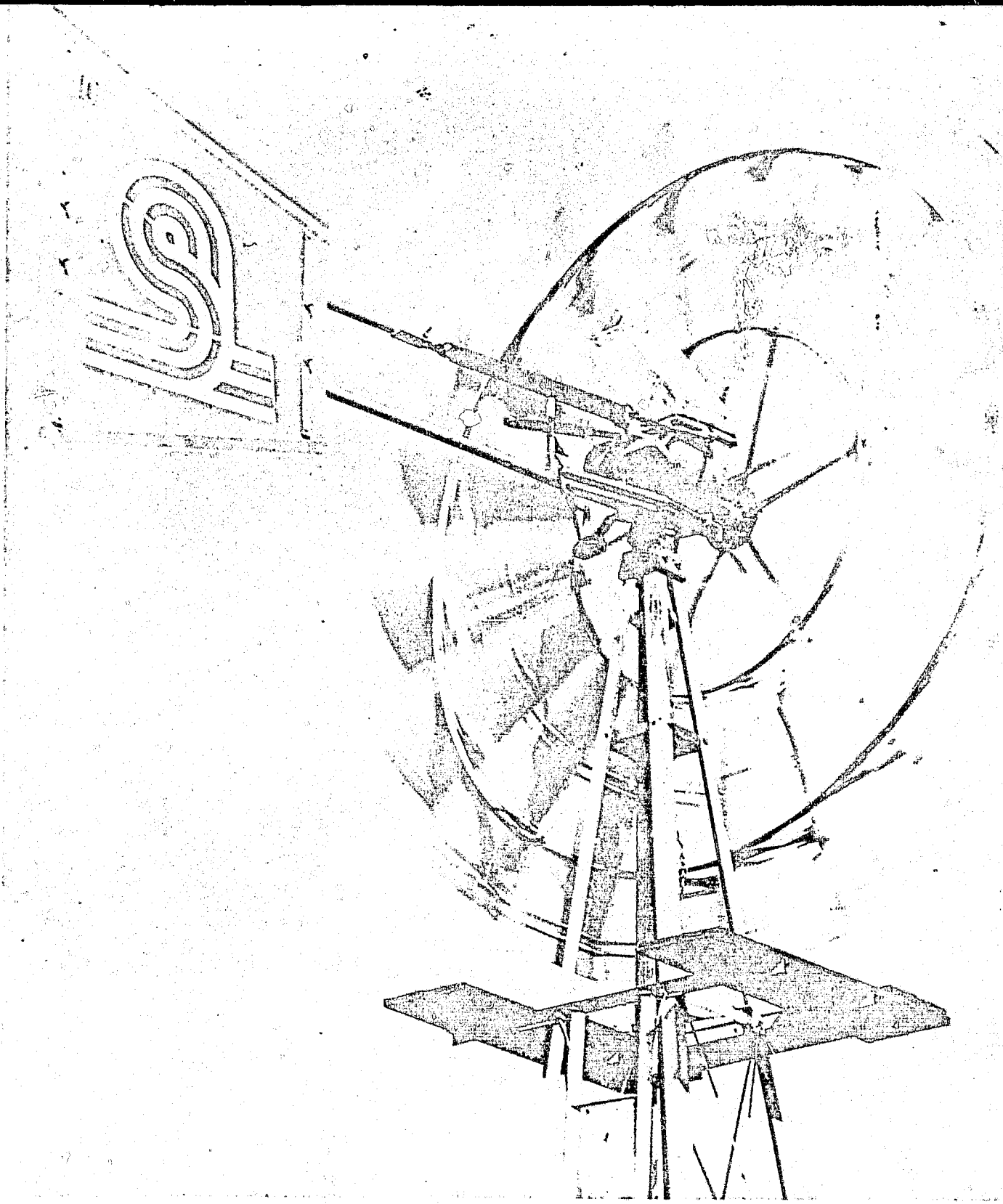


4

Windpumps have been in the Stewarts & Lloyds product range since the early part of the century.

Windpompe is sedert die vroeë jare van die eeu in die produktereeks van Stewarts & Lloyds.



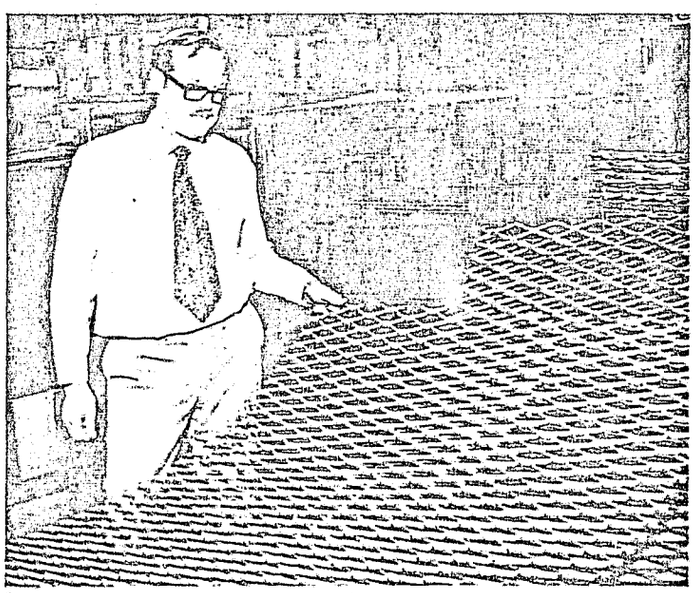


1 The manufacture of Protomex grating by Alers Hankey (Expanded Metal) (Pty) Ltd, opens up new markets for the group. The company's general manager, S Turner handles a sheet of expanded metal.
2 RH Kieser, general manager, and G Houghton, factory manager of Koolmaster Manufacturing (Pty) Ltd, discuss one of the many types of condenser produced by the company.
3 BL Hedding and N Cheetham general manager and works manager respectively, of Vivian-Colt (Pty) Ltd, examining fabricated ducting.

1 Die vervaardiging van Protomex-roosterplaat deur Alers Hankey (Expanded Metal) (Pty) Ltd stel nuwe markte vir die groep oop. Die maatskappy se algemene bestuurder S Turner hanteer 'n stuk plaatgaas.
2 RH Kieser, algemene bestuurder, en G Houghton, fabrieksbestuurder van Koolmaster Manufacturing (Pty) Ltd, bespreek een van die baie soorte kondensators wat deur die maatskappy vervaardig word.
3 BL Hedding en N Cheetham, algemene bestuurder en fabrieksbestuurder onderskeidelik, van Vivian-Colt (Pty) Ltd, ondersoek vervaardigde leiding.

4 JK Fulton (Pty) Ltd have moved into the field of underground mining machinery. RC Pestell, general manager, and JHM Jenkins, works manager of the company, look over an FMC roofbolter, before it is despatched.

4 JK Fulton (Pty) Ltd het die gebied van ondergrondse mynmasjinerie betree. RC Pestell, algemene bestuurder, en JHM Jenkins, fabrieksbestuurder van die maatskappy, ondersoek 'n FMC-dakboutskieter voordat dit na 'n myn versend word.



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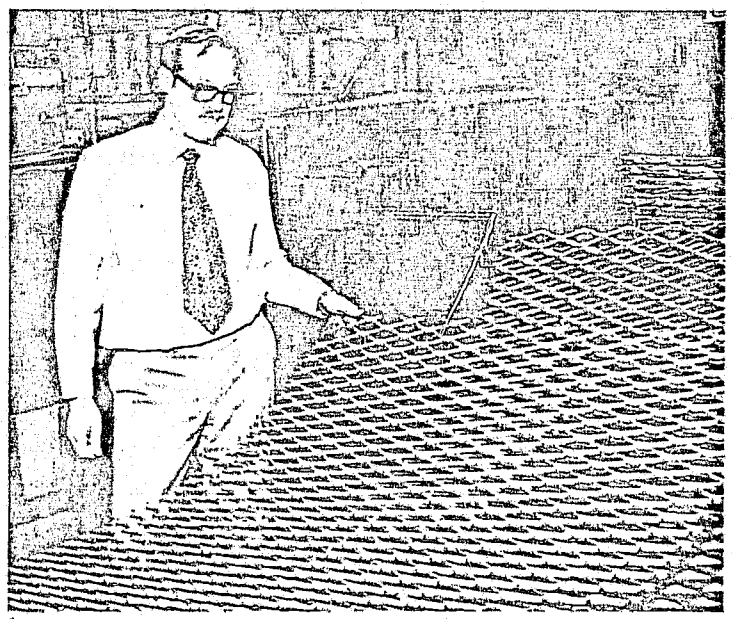
maatskappy vervaardig word.
3 BL Hedding en N Cheetham, algemene bestuurder en fabrieksbestuurder onderskeidelik, van Vivian-Cole (Pty) Ltd, ondersoek vervaardigde leiding.



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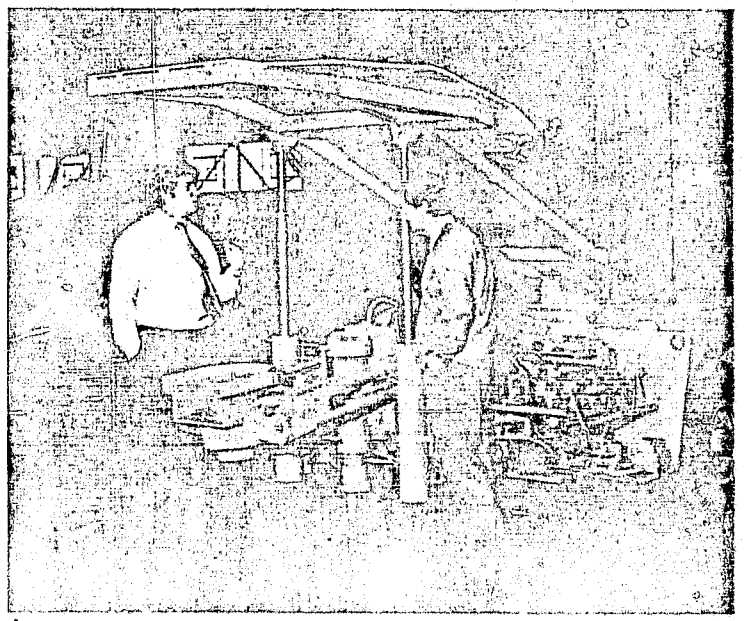
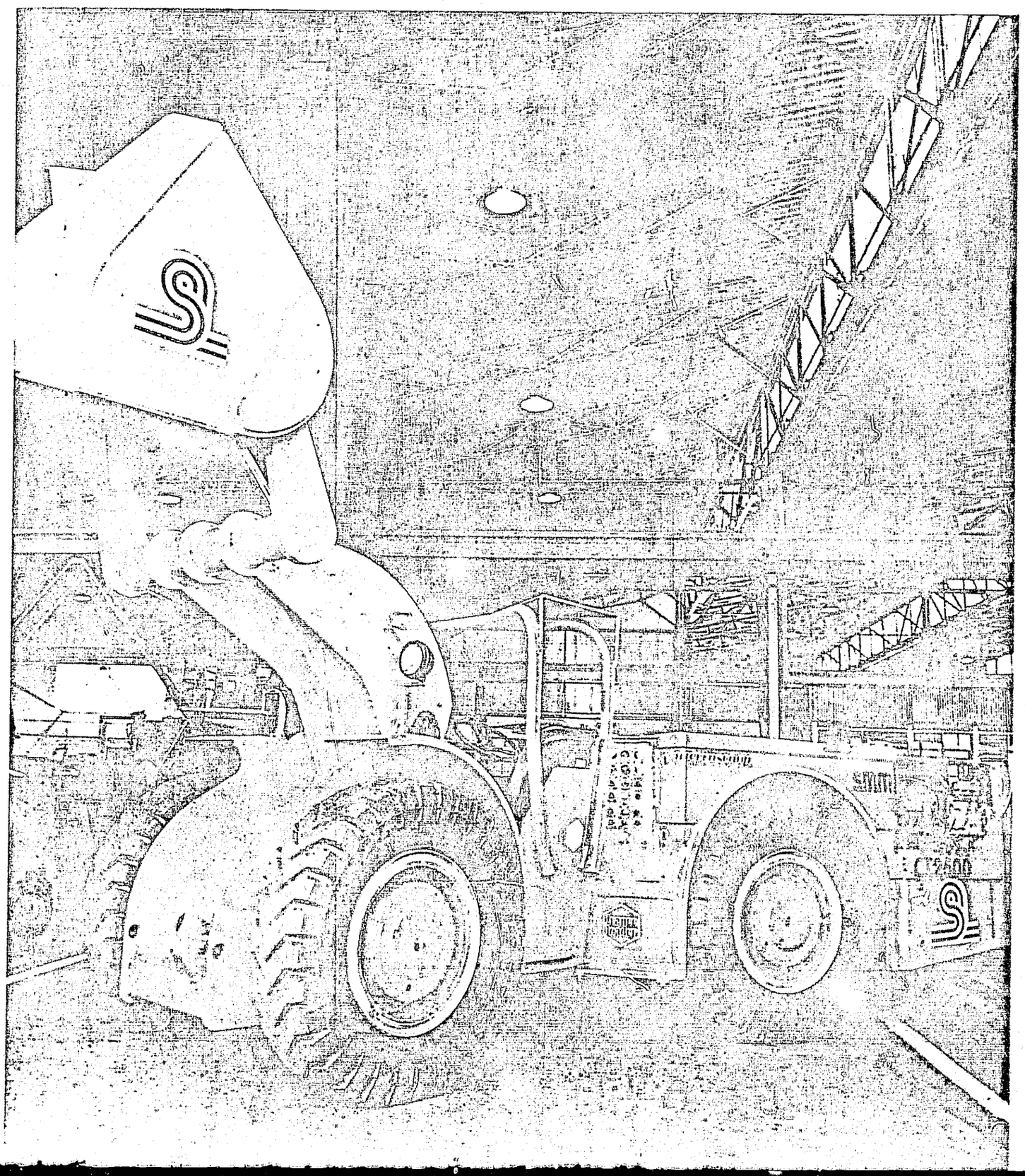
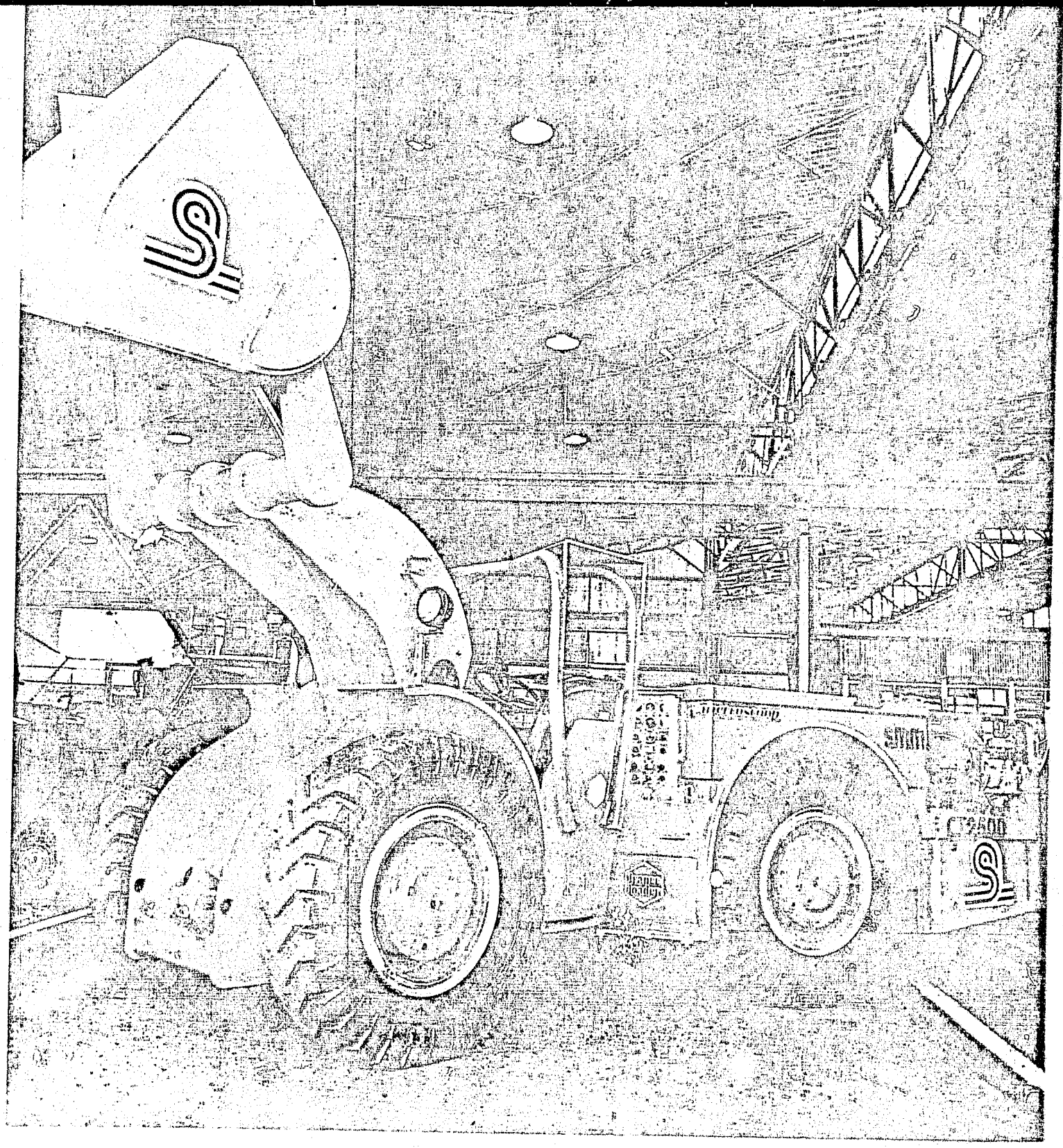


4

A 'France' load haul-dump machine, manufactured under licence from L'Equipement Minier, is another item in the JK Fulton range which will extend their participation in the mining industry.

'n 'France'-laai-trek-stortmasjien wat onder lisensie van L'Equipement Minier vervaardig word, is nog 'n item in die JK Fulton-reeks wat hulle deelname aan die mynbedryf sal uitbrei.





Accounting policies

The principal accounting policies of the group as set out hereunder have in all material respects been consistently followed.

Consolidation principles
The consolidated financial statements incorporate the results and financial position of the company and all its subsidiaries. The results of subsidiaries are included from the dates of acquisition. The net excess cost of shares in subsidiaries over the net asset values thereof at the date of acquisition, is set-off against share premium.

Assets, liabilities, and the results of foreign subsidiaries are translated at the rates of exchange ruling at the year end. Any surplus/deficit arising on translation of foreign net assets due to currency realignments is transferred directly to non-distributable reserves.

Foreign currencies
Assets and liabilities in foreign currencies are translated to South African currency at the appropriate rates ruling at the year end, or at rates determined by forward exchange contracts.

Turnover
Turnover is determined from the total net invoiced value of goods, services and delivery charges, allowance being made for credit notes for return of goods or price adjustments. Trade discounts, where applicable, are deducted to arrive at the net invoiced value. Cash discounts are not deducted.

Depreciation and amortisation
No depreciation is provided on land. Depreciation on other fixed assets is calculated on a straight line basis over the estimated life of the asset concerned.

Leasehold premises are capitalised and written off over the period of the lease.

Leasing charges
The costs of leasing or hiring plant and equipment are charged to income as incurred.

Deferred taxation
Deferred taxation is accounted for on the liabilities method on timing differences which arise when income and expense items are recognised for tax purposes in different financial periods. Account is taken of deferred tax credits which may arise only when the realisation of that asset is reasonably assured.

Stock
Raw materials and consumable stores are valued on a first-in first-out basis, except for a certain subsidiary where the basis is last-in first-out. Work in progress and finished goods are valued at cost, which includes raw materials, direct and indirect manufacturing costs. Merchandise is valued on an average basis. Stock values are adjusted to the lowest of cost, net realisable or replacement value. Where applicable, provision is made for slow moving, depreciated and redundant stock.

Contracts in progress are valued at the cost of materials, wages and direct expenses incurred, less cost of amounts invoiced to date. Profit is taken as and when amounts are invoiced to customers and is based on a conservative estimate of the profit to be expected from the contract. Provision for possible future losses is made where necessary.

Rekeningkundige beleid

Die hoofbeleidsrigtings van die groep soos hieronder uiteengesit, is in alle wesenlike opsigte konsekwent nagekom.

Konsolidasiebeginsels
Die gekonsolideerde finansiële state behels die resultate en finansiële stand van die maatskappy en al sy filiale. Die resultate van die filiale word ingesluit vanaf die datums van verkryging. Die netto koste-oorskot van aandele in filiale bo die betrokke netto batewaardes op verkrygingsdatum word teen aandelepremie verreken.

Bates, laste en die resultate van buitelandse filiale word omgereken teen wisselkoerse wat aan die jaareinde geheers het. Enige surplus/tekort wat voortspruit uit die omrekening van buitelandse netto bates as gevolg van valutaherskikkings word regstreeks na nie-verdeelbare reserwes oorgedra.

Buitelandse valuta
Bates en laste in buitelandse valuta word in Suid-Afrikaanse valuta omgereken teen die toepaslike wisselkoerse wat aan die jaareinde van krag was of teen koerse wat deur valutatermynkontrakte bepaal word.

Omset
Omset word bereken van die totale netto gefaktureerde waarde van goedere, dienste en afleweringskoste, terwyl rekening gehou word met kredietnotas vir terugsending van goedere of prysaansuiwerings. Handelskortings, waar van toepassing, word afgetrek om die netto gefaktureerde waarde te bepaal. Kontantkortings word nie afgetrek nie.

Waardevermindering en amortisasie
Geen waardevermindering word op grond voorsien nie. Waardevermindering op ander vaste bates word bereken op 'n vastepaaiementbasis oor die geraamde lewensduur van die betrokke bate.

Huurpagpersele word oor die termyn van die huurkontrak gekapitaliseer en afgeskryf.

Bruikhuurkoste
Huurkoste t.o.v. aanleg en toerusting word teen inkomste gedebiteer wanneer hierdie onkoste aangegaan word.

Uitgestelde belasting
Uitgestelde belasting word in berekening gebring volgens die aanspreeklikheidsmetode ten opsigte van tydsverskille wat ontstaan wanneer inkomste en uitgawe-items vir belastingdoeleindes in verskillende finansiële tydperke erken word. Rekening word gehou met uitgestelde belasting-krediete wat moontlik kan ontstaan slegs wanneer die realisasie van sodanige bate redelik versekerd is.

Voorraad
Grondstowwe en verbruiksvoorraad word op 'n eerste-in, eerste-uit grondslag gewaardeer, met uitsondering van 'n sekere filiaal waar die grondslag laaste-in, eerste-uit is. Onvoltooide werk en klaarprodukte word teen kosprys gewaardeer, wat grondstowwe, regstreekse en onregstreekse vervaardigingskoste insluit. Handelsware word op 'n gemiddelde basis gewaardeer. Voorraadwaardes word aangesuiwer tot die laagste van kosprys, netto realiseerbare of vervangingswaarde. Waar van toepassing, word voorsiening gemaak vir trae, gedepresieerde en oortollige voorraad.

Lopende kontrakte word gewaardeer teen die kosprys van grondstowwe, lone en regstreekse onkoste aangegaan, min kosprys van bedrae tot op datum gefaktureer. Wins word bereken vanaf die tydstip dat bedrae aan klante gefaktureer word en word gebaseer op 'n konserwatiewe raming van die wins wat van die kontrak verwag kan word. Waar nodig, word voorsiening vir moontlike toekomstige verliese gemaak.

	Company Maatskappy		Group Groep		
	1976 R000	1977 R000	1977 R000	1976 R000	
4 Taxation					**Belasting**
South African and foreign	693	32	5 165	6 933	Suid-Afrikaanse en buitelandse
Deferred	—	—	(117)	228	Uitgestelde
Current normal taxation	693	32	5 048	7 161	Huidige normale belasting
Withholding tax on foreign dividends	148	203	203	148	Terughoubelasting op buitelandse dividende
Adjustment in respect of prior years including deferred taxation	—	(55)	(89)	(118)	Aansuiwering t.o.v. vorige jare met inbegrip van uitgestelde belasting
	841	180	5 162	7 191	
Reconciliation of current normal taxation charge:					Rekonsiliasie van huidige normale belastingsdebiet:
Tax on income before taxation calculated at basic South African rate	2 669	2 064	5 978	7 775	Belasting op inkomste voor belasting bereken teen basiese Suid-Afrikaanse koers
Adjustments due to:					Aansuiwerings as gevolg van:
Permanent differences					Permanente verskille
Investment allowances	(56)	(20)	(234)	(265)	Beleggingstoelaes
Government incentives	(67)	(71)	(252)	(219)	Regeringsaansporings
Disallowed items	250	131	255	150	Ontoelaatbare items
Exempt income	(2 088)	(2 094)	(256)	(121)	Vrygestelde inkomste
Effect of different rates of foreign taxation	—	8	102	(13)	Gevolge van verskillende koerse van buitelandse belasting
Timing differences not taken into account in determining deferred taxation	—	13	153	(150)	Tydverskille nie in ag geneem by bepaling van uitgestelde belasting nie
Losses					Verliese
Assessed losses from prior years	(15)	—	(700)	(124)	Aangeslane verliese van vorige jare
Current year losses carried forward	—	1	2	128	Verliese van lopende jaar oorgedra
Current normal taxation	693	32	5 048	7 161	Huidige normale belasting

5 Share capital

(a) Ordinary

The authorised ordinary share capital is R15 000 000 (1976 R15 000 000) comprising 30 000 000 (1976 30 000 000) shares of 50 cents each of which 22 790 533 (1976 22 510 533) have been issued fully paid, giving an issued capital of R11 395 266 (1976 R11 255 266).

In terms of the share incentive scheme 280 000 shares were issued during the year.

The unissued shares may be issued by the directors at their discretion. The authority was given at the Annual General Meeting held on 25 February 1977 and remains in force until the next Annual General Meeting.

(b) Preference

The authorised, issued and fully paid preference share capital is R600 000 comprising 300 000 6 per cent first cumulative shares of R2 each.

Aandelekapitaal

(a) Gewone

Die gemagtigde gewone aandelekapitaal is R15 000 000 (1976 R15 000 000) wat bestaan uit 30 000 000 (1976 30 000 000) aandele van 50 sent elk, waarvan 22 790 533 (1976 22 510 533) as volopbetaald uitgereik is, wat 'n uitgereikte kapitaal gee van R11 395 266 (1976 R11 255 266).

Ingevolge die aandeelaansporingskema is 280 000 aandele gedurende die jaar uitgereik.

Die onuitgereikte aandele mag deur die direkteure na goeddunke uitgereik word. Dié magtiging is verleen by die Algemene Jaarvergadering op 25 Februarie 1977 gehou en bly van krag tot die volgende Algemene Jaarvergadering.

(b) Voorkeur

Die gemagtigde, uitgereikte en volopbetaalde voorkeur-aandelekapitaal bedra R600 000 bestaande uit 300 000 6 persent eerste kumulatiewe aandele van R2 elk.

R000 R000 R000 R000

	Company Maatskappy		Group Groep		
	1976 R000	1977 R000	1977 R000	1976 R000	
6 Share premium					**Aandelepremie**
Balance at beginning of the year	14 210	14 210	14 210	14 210	Saldo aan begin van die jaar
Add: Amount arising on shares issued during the year	—	308	308	—	*Plus:* Bedrag voortspruitend uit aandele gedurende die jaar uitgereik
Deduct: Net excess cost of shares in subsidiaries over the net asset values thereof at the date of acquisition, brought forward			(6 379)	(6 430)	*Min:* Netto koste-oorskot van aandele in filiale bo hul netto batewaardes op datum van verkryging, oorgebring
Add: Net amount arising from acquisitions and disposal during the year			58	51	*Plus:* Netto bedrag voortspruitend uit verkrygings en verkope gedurende die jaar
	14 210	14 518	8 197	7 831	
7 Reserves					**Reserwes**
Non-distributable reserves					**Nie-verdeelbare reserwes**
Balance at beginning of the year		1 442	4 174		Saldo aan begin van die jaar
Add: Surplus arising on disposal of fixed assets		57	57		*Plus:* Oorskot voortspruitend uit verkoop van vaste bates
Surplus arising on revaluation of fixed assets		—	1 507		Surplus voortspruitend uit herwaardasie van vaste bates
Amount transferred from general reserve arising from restructuring of Rhodesian operations			200		Bedrag oorgedra vanaf algemene reserwe voortspruitend uit herstrukturering van Rhodesiese bedrywighede
Deduct: Amount relating to subsidiary disposed of		—	(13)		*Min:* Bedrag ten opsigte van filiaal verkoop
Surplus arising on translation of foreign net assets realised and transferred to income		—	(114)		Surplus voortspruitend uit omrekening van buitelandse netto bates gerealiseer en na inkomste oorgedra
		1 499	5 811		
Comprising:					Bestaande uit:
Bonus shares issued by subsidiaries and written off by holding company	—	—	540	540	Bonusaandele deur filiale uitgereik en afgeskryf deur houermaatskappy
Capital surplus arising on disposal of fixed assets	1 286	1 343	1 709	1 665	Kapitaalsurplus voortspruitend uit verkoop van vaste bates
Surplus arising on translation of foreign net assets due to currency realignments	156	156	938	1 052	Surplus voortspruitend uit omrekening van buitelandse netto bates as gevolg van valutaherskikkings
Amount arising on restructuring of Rhodesian operations	—	—	1 064	864	Bedrag voortspruitend uit herstrukturering van Rhodesiese bedrywighede
Surplus on revaluation of land and buildings	—	—	1 560	53	Surplus met herwaardasie van grond en geboue
	1 442	1 499	5 811	4 174	
Distributable reserves					**Verdeelbare reserwes**
General reserve	19 761	19 761	39 401	32 401	Algemene reserwe
Add: Transfer during the year	—	—	7 000	7 000	*Plus:* Oordrag gedurende die jaar
Deduct: Transfer to non-distributable reserves			(200)	—	*Min:* Oordrag na nie-verdeelbare reserwes
	19 761	19 761	46 201	39 401	
Retained income	8 524	9 176	8 097	11 094	Inkomste behou
	28 285	28 937	54 298	50 495	

	Company Maatskappy			Group Groep			
	Book value Boek-waarde	Depreciation Waarde-vermindering	Cost or valuation Kosprys of waardasie	Cost or valuation Kosprys of waardasie	Depreciation Waarde-vermindering	Book value Boek-waarde	
	R000	R000	R000	R000	R000	R000	
10 Fixed assets							**Vaste bates**
1976							1976
Freehold land and buildings	3 751	2 299	6 050	18 339	4 722	13 617	Vrypaggrond en geboue
Leasehold premises	511	562	1 073	1 151	628	523	Huurpagpersele
Plant and equipment	743	1 491	2 234	28 473	18 280	10 193	Aanleg en toerusting
Capital work in progress	85	—	85	660	—	660	Lopende kapitaalwerk
	5 090	4 352	9 442	48 623	23 630	24 993	
1977							**1977**
Freehold land and buildings	**3 776**	**2 343**	**6 119**	**19 789**	**4 279**	**15 510**	Vrypaggrond en geboue
Leasehold premises	**486**	**583**	**1 069**	**1 155**	**651**	**504**	Huurpagpersele
Plant and equipment	**643**	**1 499**	**2 142**	**31 325**	**20 373**	**10 952**	Aanleg en toerusting
Capital work in progress	**33**	—	**33**	**1 194**	—	**1 194**	Lopende kapitaalwerk
	4 938	**4 425**	**9 363**	**53 463**	**25 303**	**28 160**	

Plant and machinery with a book value of R164 000 is subject to a hire purchase agreement. Assets of subsidiaries with a book value of R2 506 000 were revalued during the year by an amount of R2 124 000. Of this amount R396 000 was transferred to amount set aside for deferred taxation, R221 000 to outside shareholders, and R1 507 000 to non-distributable reserves. Due to the large portfolio of fixed property it would be cumbersome to present details of the individual properties. However, a register of freehold land and buildings and leasehold premises is kept at the registered office of the company and may be inspected by members or their duly authorised agent. A summary of the present book value of the main categories of freehold land and buildings is given below:

Aanleg en masjinerie ter boekwaarde van R164 000 is onderworpe aan 'n huurkoopooreenkoms. Bates in filiale ter boekwaarde van R2 506 000 is gedurende die jaar herwaardeer met 'n bedrag van R2 124 000. Van hierdie bedrag is R396 000 oorgedra na die bedrag wat vir uitgestelde belasting opsy gesit is, R221 000 na buite-aandeelhouers, en R1 507 000 na nie-verdeelbare reserwes. Vanweë die groot portefeulje vaste eiendom sou dit omslagtig wees om besonderhede van die afsonderlike eiendomme te verstrek. 'n Register van vrypaggrond en geboue en huurpagpersele word egter by die geregistreerde kantoor van die maatskappy ter insae van lede of hulle behoorlik gemagtigde agente gehou. 'n Opsomming van die huidige boekwaarde van die hoofkategorieë van vrypaggrond en geboue word hieronder verstrek:

Acquired or revalued	Manufacturing Vervaardiging	Trading Handel	Other Ander	Verkry of herwaardeer
Prior to 1950	33	138	11	Voor 1950
10 years ended 30 September 1960	355	526	62	10 jaar geëindig 30 September 1960
10 years ended 30 September 1970	1 109	3 846	90	10 jaar geëindig 30 September 1970
5 years ended 30 September 1975	2 190	1 414	76	5 jaar geëindig 30 September 1975
Year ended 30 September 1976	625	553	23	Jaar geëindig 30 September 1976
Year ended 30 September 1977	2 620	1 498	341	Jaar geëindig 30 September 1977

	1976 R000	**1977 R000**	**1977 R000**	1976 R000	
11 Capital commitments					**Kapitaalverpligtinge**
Commitments in respect of contracts	—	**129**	**6 126**	303	Verpligtinge t.o.v. kontrakte
Balance of schemes authorised by the directors	708	**416**	**5 046**	1 185	Saldo van skemas deur die direkteure gemagtig
Total unexpended authorisations	708	**545**	**11 172**	1 488	Totale onbestede magtigings
Funds to meet this expenditure will be provided from working capital and export finance credits.					Fondse om hierdie uitgawe te dek, sal voorsien word uit bedryfskapitaal en uitvoerfinansieringskrediete.

	Company Maatskappy		Group Groep		
	1976 R000	1977 R000	1977 R000	1976 R000	
12 Investments					**Beleggings**
Unlisted					**Ongenoteer**
80 000 Ordinary shares of R1 each in Vivian-Saunders (Pty) Limited, and 30 000 Ordinary shares of R1 each in Vivian Regina (Pty) Limited					80 000 Gewone aandele van R1 elk in Vivian-Saunders (Pty) Limited, en 30 000 Gewone aandele van R1 elk in Vivian Regina (Pty) Limited
At cost less amount written off	—	—	99	99	Teen kosprys min bedrae afgeskryf
Directors' valuation R699 000 (1976 R493 000)					Direkteurswaardasie R699 000 (1976 R493 000)
	—	—	99	99	
13 Subsidiaries					**Filiale**
Shares at cost including nominal value of bonus shares received less amounts written off	40 233	41 088			Aandele teen kosprys insluitende nominale waarde van bonusaandele ontvang min bedrae afgeskryf
Amounts owing by subsidiaries less provision for loss	26 185	29 162			Bedrae deur filiale verskuldig min voorsiening vir verlies
	66 418	70 250			
Deduct: Amounts owing to subsidiaries	4 339	4 630			*Min:* Bedrae aan filiale verskuldig
	62 079	65 620			
14 Stock					**Voorraad**
Raw materials	1 192	149	7 803	9 557	Grondstowwe
Consumable stores	—	67	4 032	3 573	Verbruiksvoorraad
Work in progress	247	231	8 352	9 721	Onvoltooide werk
Finished goods and merchandise	5 998	5 397	36 107	32 570	Klaarprodukte en handelsware
Contracts in progress	—	—	926	997	Lopende kontrakte
	7 437	5 844	57 220	56 418	

15 Leasing Analysis of leasing charges incurred, together with the remaining payments on contracts.	Plant and machinery Aanleg en masjinerie R000	Income earning vehicles Opbrengs-gewende voertuie R000	Managerial vehicles Bestuurs-voertuie R000	Office equipment Kantoor-toerusting R000	**Bruikhuur** Ontleding van bruikhuurkoste aangegaan, tesame met die oorblywende betalings op kontrakte.
Year ended 30 September 1977	527	658	318	647	Jaar geëindig 30 September 1977
Year ending 30 September 1978	608	584	280	473	Jaar geëindig 30 September 1978
Year ending 30 September 1979	540	465	223	479	Jaar geëindig 30 September 1979
Year ending 30 September 1980	429	243	128	404	Jaar geëindig 30 September 1980
Year ending 30 September 1981	134	76	38	341	Jaar geëindig 30 September 1981
5 years ending 30 September 1986	22	—	—	471	5 jaar geëindig 30 September 1986

Interests in subsidiaries Belange in filiale

	Name of subsidiary Naam van filiaal	Incorporated in Ingelyf in	Issued capital Ord. and Pref.* Uitgereikte kapitaal Gew. en Voork.*	Percentage holding Persentasie besit
			R	%
1	Stewarts & Lloyds of South West Africa Limited	S.W.A.	160 000	100
1	Stewarts & Lloyds (Malawi) Limited	Malawi	MK 110 000	100
1	Stewarts & Lloyds of Rhodesia Limited	Rhod.	R$5 931 000	100
2	Tubemakers of South Africa Limited	R.S.A.	6 983 976	100
3	Tube & Pipe Industries (Pty) Limited	R.S.A.	200	100
4	Eagle Tube Company (Pty) Limited	R.S.A.	690 000	100
4	Samal Investments (Pty) Limited	R.S.A.	6	100
4	Scottish Tube Company of South Africa Limited	R.S.A.	480 000	100
4	Salsa Properties (Germiston) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Pietermaritzburg) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Randburg) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Pietersburg) (Pty) Limited	R.S.A.	4	100
4	Salsa Properties (George) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Algoa Bay) (Pty) Limited	R.S.A.	20 000	100
4	Salsa Properties (Berg Street, Pietermaritzburg) (Pty) Limited	R.S.A.	4	100
4	Salsa Properties Vereeniging (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Boksburg) (Pty) Limited*	R.S.A.	8 000	100
4	J.K. Fulton Investments (Pty) Limited	R.S.A.	2	100
4	J.H. Vivian Holdings (Pty) Limited	R.S.A.	2 000 *48 000	100
4	J & C Malleable Properties (Pty) Limited	R.S.A.	4	100
5	African Malleable Foundries Limited	R.S.A.	450 000	100
6	Vosa Valves (Pty) Limited	R.S.A.	400 000	100
7	Salweir (Pty) Limited	R.S.A.	300 000	60
8	Maksal Tubes (Pty) Limited	R.S.A.	3 750 000	50
9	Bundy Tubing Company of South Africa (Pty) Limited	R.S.A.	865 100	55
10	Pipe Couplings (Pty) Limited	R.S.A.	250 000	51
11	Tubemakers of Rhodesia Limited	Rhod.	R$2 000	100
12	Capillary Tubes (Pty) Limited	R.S.A.	5 000	50
13	H. Incledon & Company (South Africa) Limited	R.S.A.	2 250 000	100
14	H. Incledon & Company (Central Africa) Limited	Rhod.	R$8 000	100
15	Weiser Lock Company (South Africa) (Pty) Limited	R.S.A.	1 000	100
16	J.H. Vivian & Company Limited	R.S.A.	1 035 000 *300 000	100
17	J & C Malleable (Pty) Limited	R.S.A.	400 000	100
18	J.K. Fulton (Pty) Limited	R.S.A.	150 000	100
19	Vivian-Colt (Pty) Limited	R.S.A.	45 000	100
20	Salchain (Pty) Limited*	R.S.A.	20 000	100
21	Baldwins Limited	R.S.A.	800 000	100
21	Baldwins (Rhodesia) (Pvt) Limited	Rhod.	R$3 138 500	100
21	H. Alers Hankey (Cape) (Pty) Limited †	R.S.A.	2	100
21	H. Alers Hankey (Natal) (Pty) Limited †	R.S.A.	2	100
22	Baldwins (Alloy Steels) (Pty) Limited	R.S.A.	200	100
23	J.H. Vivian & Wilfred Watson (Pvt) Limited	Rhod.	R$359 000	60
23	Anderson Hardware (Pty) Limited ø	R.S.A.	48 000 *104 600	100
24	Vosa Valves Incorporated	U.S.A./V.S.A.	US$1 000	100
24	Salvalve (Pty) Limited	R.S.A.	1 000	100
25	S & L (Pty) Limited	R.S.A.	100	100
25	S.A. Chain Belt Company (Pty) Limited	R.S.A.	4	100
25	R.M.C. Foundry (1959) S.A. (Pty) Limited	R.S.A.	2 000	100
26	Plasal (Pty) Limited	R.S.A.	958 000	100
27	Baldwins Steel Services (Pty) Limited	R.S.A.	1 000	100
27	Baldwins-Hankey (Pty) Limited* †	R.S.A.	2	100
28	Koolmaster Manufacturing (Pty) Limited	R.S.A.	100	100
29	Jet Air Curtains South Africa (Pty) Limited	R.S.A.	4 000	100
30	Alers Hankey (Expanded Metal) (Pty) Limited †	R.S.A.	2	100
31	Salister Diesels (Pty) Limited ‡	R.S.A.	1 428 571	65
32	Tubewrights (Pty) Limited	R.S.A.	1 000	100

Changes during the year

*Names of subsidiaries changed
†Subsidiaries acquired
‡Subsidiary incorporated
øSubsidiary sold

Veranderinge gedurende die jaar

*Name van filiale verander
† Filiale verkry
‡ Filiaal ingelyf
ø Filiaal verkoop

4	Scottish Tube Company of South Africa Limited	R.S.A.	480 000	100
4	Salsa Properties (Germiston) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Pietermaritzburg) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Randburg) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Pietersburg) (Pty) Limited	R.S.A.	4	100
4	Salsa Properties (George) (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Algoa Bay) (Pty) Limited	R.S.A.	20 000	100
4	Salsa Properties (Berg Street, Pietermaritzburg) (Pty) Limited	R.S.A.	4	100
4	Salsa Properties Vereeniging (Pty) Limited	R.S.A.	1 000	100
4	Salsa Properties (Boksburg) (Pty) Limited*	R.S.A.	8 000	100
4	J.K. Fulton Investments (Pty) Limited	R.S.A.	2	100
4	J.H. Vivian Holdings (Pty) Limited	R.S.A.	2 000 *48 000	100
4	J & C Malleable Properties (Pty) Limited	R.S.A.	4	100
5	African Malleable Foundries Limited	R.S.A.	450 000	100
6	Vosa Valves (Pty) Limited	R.S.A.	400 000	100
7	Salweir (Pty) Limited	R.S.A.	300 000	60
8	Maksal Tubes (Pty) Limited	R.S.A.	3 750 000	50
9	Bundy Tubing Company of South Africa (Pty) Limited	R.S.A.	865 100	55
10	Pipe Couplings (Pty) Limited	R.S.A.	250 000	51
11	Tubemakers of Rhodesia Limited	Rhod.	R $2 000	100
12	Capillary Tubes (Pty) Limited	R.S.A.	5 000	50
13	H. Incledon & Company (South Africa) Limited	R.S.A.	2 250 000	100
14	H. Incledon & Company (Central Africa) Limited	Rhod.	R $8 000	100
15	Weiser Lock Company (South Africa) (Pty) Limited	R.S.A.	1 000	100
16	J.H. Vivian & Company Limited	R.S.A.	1 035 000 *300 000	100
17	J & C Malleable (Pty) Limited	R.S.A.	400 000	100
18	J.K. Fulton (Pty) Limited	R.S.A.	150 000	100
19	Vivian-Colt (Pty) Limited	R.S.A.	45 000	100
20	Salchain (Pty) Limited*	R.S.A.	20 000	100
21	Baldwins Limited	R.S.A.	800 000	100
21	Baldwins (Rhodesia) (Pvt) Limited	Rhod.	R $3 138 500	100
21	H. Alers Hankey (Cape) (Pty) Limited †	R.S.A.	2	100
21	H. Alers Hankey (Natal) (Pty) Limited †	R.S.A.	2	100
22	Baldwins (Alloy Steels) (Pty) Limited	R.S.A.	200	100
23	J.H. Vivian & Wilfred Watson (Pvt) Limited	Rhod.	R $359 000	60
23	Anderson Hardware (Pty) Limited ø	R.S.A.	48 000 *104 600	100
24	Vosa Valves Incorporated	U.S.A./V.S.A.	US $1 000	100
24	Salvalve (Pty) Limited	R.S.A.	1 000	100
25	S & L (Pty) Limited	R.S.A.	100	100
25	S.A. Chain Belt Company (Pty) Limited	R.S.A.	4	100
25	R.M.C. Foundry (1959) S.A. (Pty) Limited	R.S.A.	2 000	100
26	Plasal (Pty) Limited	R.S.A.	958 000	100
27	Baldwins Steel Services (Pty) Limited	R.S.A.	1 000	100
27	Baldwins-Hankey (Pty) Limited *†	R.S.A.	2	100
28	Koolmaster Manufacturing (Pty) Limited	R.S.A.	100	100
29	Jet Air Curtains South Africa (Pty) Limited	R.S.A.	4 000	100
30	Alers Hankey (Expanded Metal) (Pty) Limited †	R.S.A.	2	100
31	Salister Diesels (Pty) Limited ‡	R.S.A.	1 428 571	65
32	Tubewrights (Pty) Limited	R.S.A.	1 000	100

Changes during the year

*Names of subsidiaries changed
†Subsidiaries acquired
‡Subsidiary incorporated
øSubsidiary sold

Veranderinge gedurende die jaar

*Name van filiale verander
†Filiale verkry
‡Filiaal ingelyf
øFiliaal verkoop

Book value of company's holding in shares Boekwaarde van maatskappy se aandelebesit		Amounts owing to (by) main holding company Bedrae verskuldig aan (deur) hoofhouer-maatskappy	
1976	1977	1976	1977
R000	R000	R000	R000
–	–	(608)	(858)
148	148	419	438
5 163	5 163	1 484	1 207
6 984	6 984	13 605	13 953
3 778	3 778	198	232
1 055	1 055	(525)	(346)
		–	–
100	100	(558)	(548)
		164	164
		18	17
		202	194
		45	49
		31	30
		73	66
		36	36
		190	187
		257	240
		241	447
		60	60
		126	114
1 125	1 125	2 282	1 967
707	707	866	646
523	523	11	50
1 875	1 875	(138)	62
476	476	41	97
128	128	102	41
		–	–
		–	–
3 652	3 652	926	(81)
		2	–
1	1	93	80
5 465	5 465	(2 357)	(1 861)
1 623	1 623	(132)	448
300	300	758	515
112	112	422	549
148	148	627	280
5 301	5 301	8	(643)
		–	47
	53		1 671
	75		550
–	–	267	(15)
		–	10
204		[illegible]	
		–	–
1	1	1 824	1 910
–	–	–	1
–	–	–	–
2	2	52	1
958	958	755	499
1	1	(1)	–
	–		1 470
402	404	–	191
		–	–
	–		643
	929		(278)
1	1	(1)	–
40 233	41 088	26 185	29 162
		(4 339)	(4 630)
40 233	41 088	21 846	24 532

Nature of business

1 Distributors of seamless and welded steel tubes, copper and plastic tube, pipe fittings, pumps, valves, engines, windmills and irrigation equipment.
2 Manufacturers and distributors of seamless and welded steel tubes, stainless steel tubes, pipe fittings, hollow section and steel structures.
3 Distributors of seamless and welded steel tubes and pipe fittings.
4 Property owning companies.
5 Manufacturers and distributors of malleable pipe fittings.
6 Manufacturers and distributors of valves.
7 Manufacturers and distributors of pumps.
8 Manufacturers and distributors of copper and brass tube.
9 Manufacturers and distributors of Bundy tube.
10 Manufacturers and distributors of pipe couplings.
11 Manufacturers and distributors of seamless steel tubes and fabricated structures.
12 Manufacturers and distributors of capillary tubing.
13 Distributors of seamless and welded steel tubes, pipe fittings, valves and sanitaryware.
14 Distributors of valves, pipes and fittings.
15 Assemblers and distributors of Weiser locks.
16 Distributors of Saunders valves and transmission products.
17 Malleable and grey iron foundry.
18 Manufacturers and distributors of hoists, winches and penstocks.
19 Manufacturers and distributors of Colt ventilation systems and sheet metal products.
20 Manufacturers and distributors of electrical overhead line equipment, steel and malleable chain.
21 Distributors of mild steel sections, flat rolled products, corrugated iron and stainless steel.
22 Distributors of alloy steels. Heat treatment of metals, heater bars and special steels.
23 Tools, hardware and paint merchants.
24 Distributors of valves.
25 Dormant.
26 Manufacturers and distributors of plastic tube and fittings.
27 Processing and marketing of basic steel products.
28 Manufacturers of components for the refrigeration and air conditioning industries.
29 Manufacturers of environmental control equipment.
30 Manufacturers of expanded metal products.
31 Manufacturers, importers and assemblers of Lister diesel engines and lighting sets.
32 Designers, fabricators and erectors of conventional and space frame steel structures.

Aard van besigheid

1 Verspreiders van naatlose en gesweiste staalpype, koper- en plastiekpyp, pyptoebehore, pompe, kleppe, enjins, windpompe en besproeiingstoerusting.
2 Vervaardigers en verspreiders van naatlose en gesweiste staalpype, pype van vlekvrye staal, pyptoebehore, holseksies en staalstrukture.
3 Verspreiders van naatlose en gesweiste staalpype en pyptoebehore.
4 Eiendomsbesittende maatskappye.
5 Vervaardigers en verspreiders van pyptoebehore van smeebare yster.
6 Vervaardigers en verspreiders van kleppe.
7 Vervaardigers en verspreiders van pompe.
8 Vervaardigers en verspreiders van koper- en bronspyp.
9 Vervaardigers en verspreiders van Bundy-pyp.
10 Vervaardigers en verspreiders van pypkoppelings.
11 Vervaardigers en verspreiders van naatlose staalpype en vervaardigde strukture
12 Vervaardigers en verspreiders van haarbuis.
13 Verspreiders van naatlose en gesweiste staalpype, pyptoebehore, kleppe en sanitêre ware.
14 Verspreiders van kleppe, pype en toebehore.
15 Monteerders en verspreiders van Weiser-slotte.
16 Verspreiders van Saunders-kleppe en transmissieprodukte.
17 Smeebare- en grysyster-gietery.
18 Vervaardigers en verspreiders van hysers, wenasse en sluiskleppe.
19 Vervaardigers en verspreiders van Colt-belugtingstelsels en plaatmetaalprodukte.
20 Vervaardigers en verspreiders van elektriese bogrondse toerusting, kettings van staal en smeebare yster.
21 Verspreiders van weekstaalseksies, gewalste platprodukte, sinkplaat, en vlekvrye staal.
22 Verspreiders van allooistaalsoorte. Hittebehandeling van metale, kloppikstawe en spesiale staalsoorte.
23 Gereedskap, ysterware en verfhandelaars.
24 Verspreiders van kleppe.
25 Rustend.
26 Vervaardigers en verspreiders van plastiekpyp, en toebehore.
27 Die verwerking en bemarking van basiese staalprodukte.
28 Vervaardigers van onderdele vir die verkoeling- en lugversorgingsnywerhede.
29 Vervaardigers van toerusting vir omgewingsbeheer
30 Vervaardigers van plaatgaasprodukte.
31 Vervaardigers, invoerders en monteerders van Lister- dieselenjins en verligtingstelle
32 Ontwerpers, vervaardigers en oprigters van konvensionele- en spasieerraamstaalstruk

Statement of group results and financial position adjusted for the effect of inflation

As a consequence of inflation the figures in the group's historical financial statements (which are expressed in rand of varying purchasing power), do not show the present day purchasing power of the ordinary shareholders' investment or the inflationary effect on the group results for the year. A statement has been prepared which shows the estimated effect of the change in the purchasing power of money on the ordinary shareholders' investment as at 30 September 1977, by adjusting to the rand of current purchasing power (C.P.P.) at that date by applying conversion factors derived from the Consumer Price Index. A comparison of this adjusted ordinary shareholders' investment, revised for any extraneous items arising during the year, with the 1976 figures similarly adjusted to the purchasing power of the rand at 30 September 1977, reflects the C.P.P. retained income for the year, and thereby the effect of inflation on the results.

Basis of adjustments

The historical figures for both years in respect of fixed assets, investments and stocks and the results have been adjusted to C.P.P. figures by applying factors based on the changes in the Consumer Price Index between the date of the originating transactions and 30 September 1977. Although the adjusted figures are shown in rand in terms of C.P.P. these are not necessarily replacement costs or current values.

The monetary items (note 3) for 1976 have been updated to C.P.P. rand at 30 September 1977. No adjustment has been made to these items for 1977 as they are already expressed in C.P.P. rand.

The figures for foreign subsidiaries included in the group financial statements have been similarly adjusted by reference to the appropriate foreign indices and then translated into C.P.P. rand at the rates of exchange ruling at 30 September 1977.

Some of the Consumer Price Indices from which the above-mentioned factors have been derived are:

Staat van resultate en finansiële stand van die groep soos aangesuiwer vir die uitwerking van inflasie

As gevolg van inflasie toon die syfers in die historiese finansiële state van die groep (wat uitgedruk is in rand van wisselende koopkrag) nie die huidige koopkrag van die gewone aandeelhouersbelegging of die inflasionêre uitwerking op die groepresultate vir die jaar nie.

'n Staat is dus voorberei wat die geraamde uitwerking toon van die verandering in die koopkrag van geld op die gewone aandeelhouersbelegging op 30 September 1977, deur die aansuiwering tot die rand van huidige koopkrag (H.K.K.) op daardie datum. Hierdie aansuiwering geskied deur die toepassing van omrekeningsfaktore wat vanaf die Verbruikersprysindeks verkry is. 'n Vergelyking van hierdie aangesuiwerde gewone aandeelhouersbelegging, wat hersien is t.o.v. enige buitengewone items wat gedurende die jaar ontstaan het, met die 1976 syfers op soortgelyke wyse aangesuiwer tot die koopkrag van die rand op 30 September 1977, weerspieël die behoue inkomste vir die jaar volgens die huidige koopkrag, en daardeur die uitwerking van inflasie op die resultate.

Basis van aansuiwerings

Die historiese syfers vir albei jare t.o.v. vaste bates, beleggings en voorrade en die resultate is aangesuiwer tot H.K.K. syfers deur die toepassing van faktore wat gebaseer is op die veranderinge in die Verbruikersprysindeks tussen die datum van die oorspronklike transaksies en 30 September 1977. Alhoewel die aangesuiwerde syfers getoon word in rand ooreenkomstig die H.K.K. is hulle nie noodwendig vervangingskoste of huidige waarde nie.

Die monetêre items (aant. 3) vir 1976 is bygewerk tot H.K.K.-rand op 30 September 1977. Geen aansuiwering is t.o.v. hierdie items vir 1977 aangebring nie aangesien hulle alreeds uitgedruk is in H.K.K.-rand.

Die syfers vir buitelandse filiale, by die finansiële state van die groep ingesluit, is op soortgelyke wyse aangesuiwer deur verwysing na die toepaslike buitelandse indekse en daarna in H.K.K.-rand omgereken teen wisselkoerse wat op 30 September 1977 geheers het.

Sommige van die Verbruikersprysindekse waaruit die bogenoemde faktore verkry is, is:

	South Africa and Swaziland Suid-Afrika en Swaziland	Rhodesia and Malawi Rhodesië en Malawi	
Base date December 1964 April 1970	100,0	100,0	Aanvangsdatum Desember 1964 April 1970
30 September 1974	143,5	140,5	30 September 1974
30 September 1975	161,0	151,0	30 September 1975
30 September 1976	179,3	165,8	30 September 1976
30 September 1977	199,5	179,8	30 September 1977

by adjusting to the rand of current purchasing power (C.P.P.) at that date by applying conversion factors derived from the Consumer Price Index. A comparison of this adjusted ordinary shareholders' investment, revised for any extraneous items arising during the year, with the 1976 figures similarly adjusted to the purchasing power of the rand at 30 September 1977, reflects the C.P.P. retained income for the year, and thereby the effect of inflation on the results.

aansuiwering tot die rand van huidige koopkrag (H.K.K.) op daardie datum. Hierdie aansuiwering geskied deur die toepassing van omrekeningsfaktore wat vanaf die Verbruikersprysindeks verkry is. 'n Vergelyking van hierdie aangesuiwerde gewone aandeelhouersbelegging, wat hersien is t.o.v. enige buitengewone items wat gedurende die jaar ontstaan het, met die 1976 syfers op soortgelyke wyse aangesuiwer tot die koopkrag van die rand op 30 September 1977, weerspieël die behoue inkomste vir die jaar volgens die huidige koopkrag, en daardeur die uitwerking van inflasie op die resultate.

Basis of adjustments

The historical figures for both years in respect of fixed assets, investments and stocks and the results have been adjusted to C.P.P. figures by applying factors based on the changes in the Consumer Price Index between the date of the originating transactions and 30 September 1977. Although the adjusted figures are shown in rand in terms of C.P.P. these are not necessarily replacement costs or current values.

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Some of the Consumer Price Indices from which the above-mentioned factors have been derived are:

Basis van aansuiwerings

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Die monetêre items (aant. 3) vir 1976 is bygewerk tot H.K.K.-rand op 30 September 1977. Geen aansuiwering is t.o.v. hierdie items vir 1977 aangebring nie aangesien hulle alreeds uitgedruk is in H.K.K.-rand.

Die syfers vir buitelandse filiale, by die finansiële state van die groep ingesluit, is op soortgelyke wyse aangesuiwer deur verwysing na die toepaslike buitelandse indekse en daarna in H.K.K.-rand omgereken teen wisselkoerse wat op 30 September 1977 geheers het.

Sommige van die Verbruikersprysindekse waaruit die bogenoemde faktore verkry is, is:

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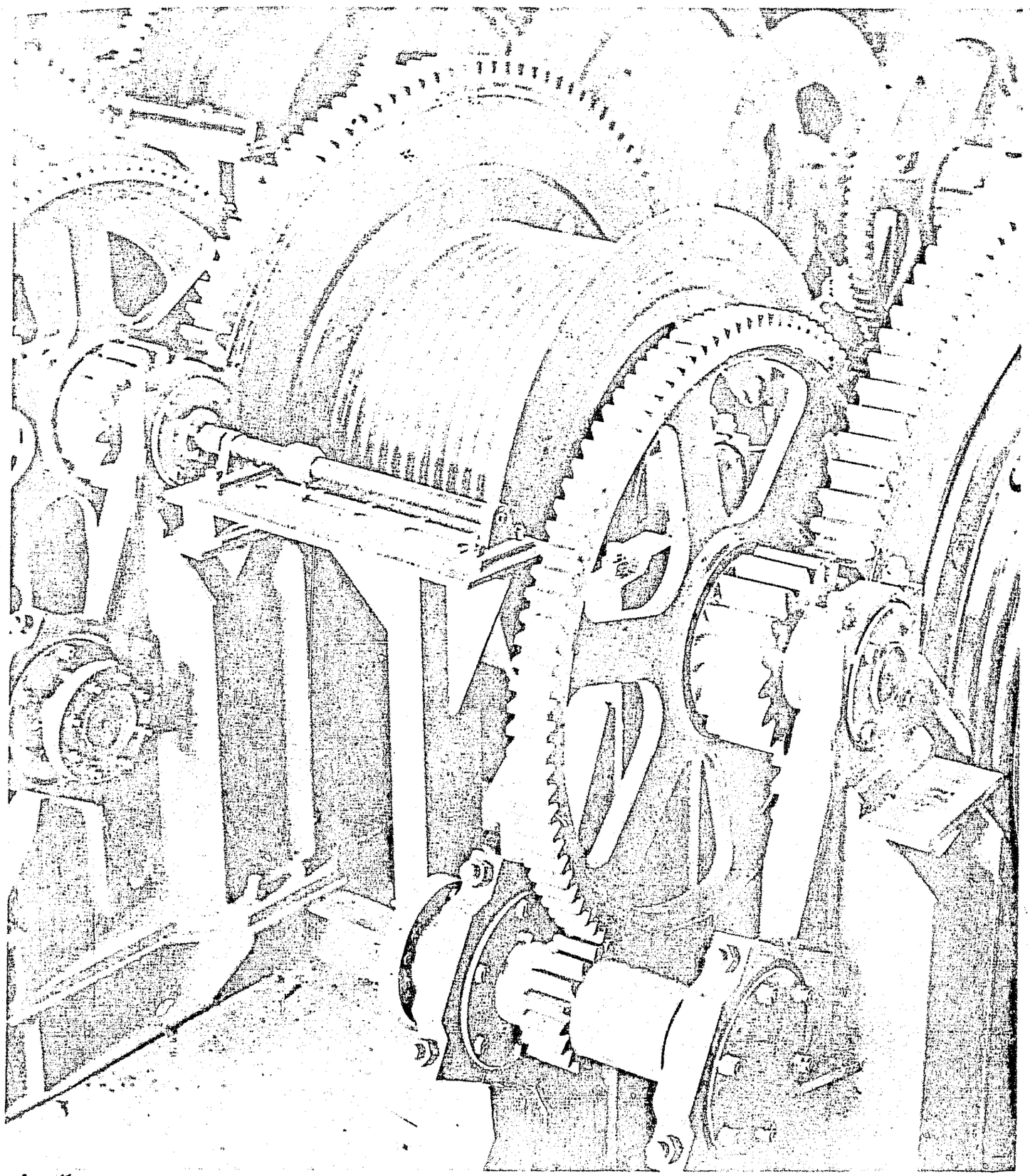
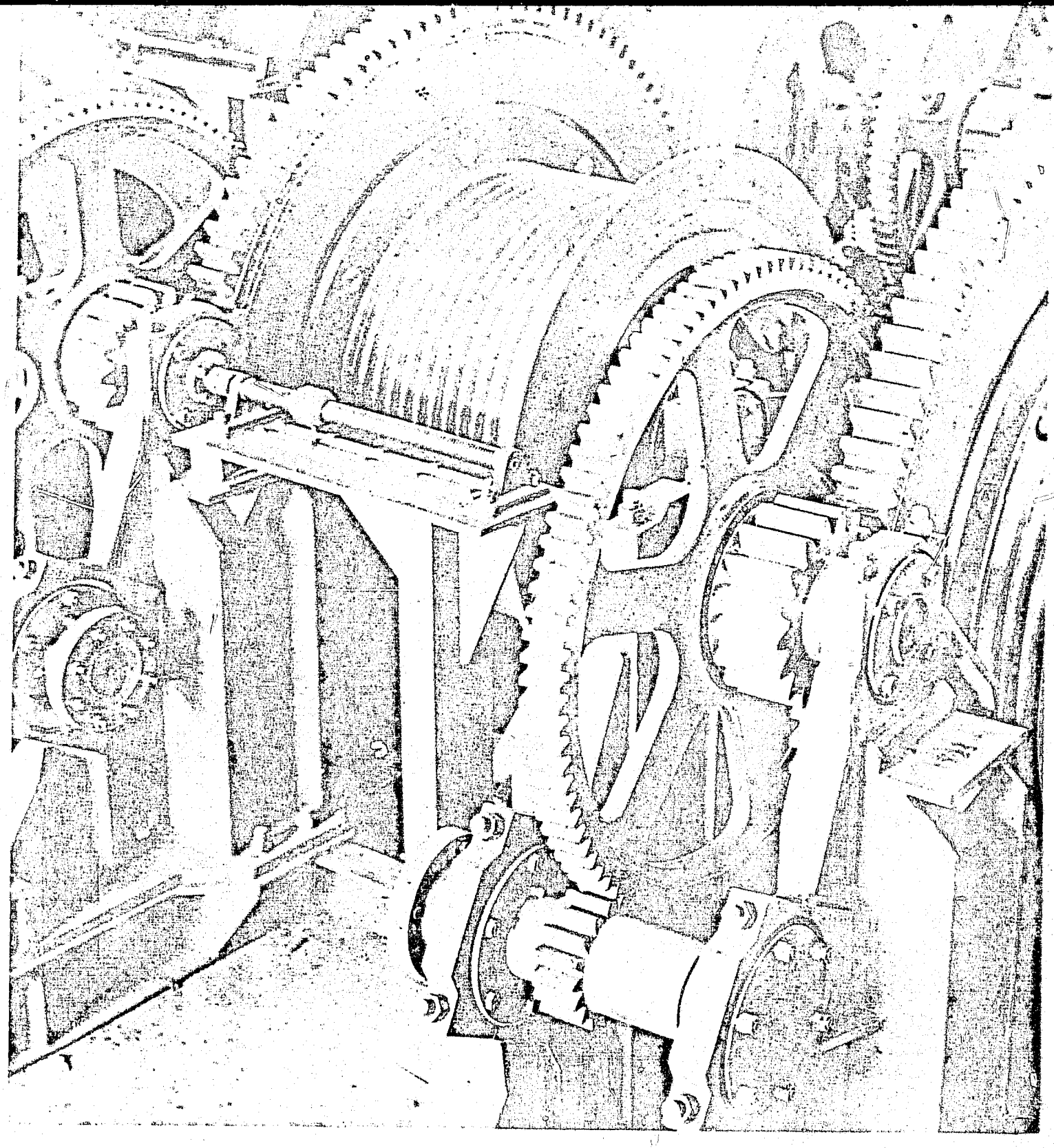
Base date December 1964 April 1970	100,0	100,0	Aanvangsdatum Desember 1964 April 1970
30 September 1974	143,5	140,5	30 September 1974
30 September 1975	161,0	151,0	30 September 1975
30 September 1976	179,3	165,8	30 September 1976
30 September 1977	199,5	179,8	30 September 1977

...ne win for waiting delivery to the mines.
...wenstoe wat gereed lê vir aflewering na die myne.





Group results and financial position adjusted for the effect of inflation

Resultate en finansiële stand van die groep, aangesuiwer vir die uitwerking van inflasie

	Historical basis Historiese basis	Adjusted basis Aangesuiwerde basis		
	1977	1977 C.P.P. H.K.K. 30.9.77	1976 Updated to Bygewerk tot 30.9.77	
	R000	R000	R000	
Results for the year to 30 September 1977				**Resultate vir die jaar tot 30 September 1977**
Turnover	206 030	216 680	242 915	Omset
Income before tax for the year (note 1)	13 903	6 619	12 269	Inkomste voor belasting vir die jaar (aant. 1)
Taxation	5 162	5 278	8 160	Belasting
Income after taxation	8 741	1 341	4 109	Inkomste na belasting
Less: Applicable to outside shareholders	771	413	459	*Min:* Toedeelbaar aan buite-aandeelhouers
Preference dividends	36	37	41	Voorkeurdividende
Earnings attributable to ordinary shareholders	7 934	891	3 609	Verdienste toedeelbaar aan gewone aandeelhouers
Ordinary dividend	3 874	3 874	4 258	Gewone dividend
Amount retained to finance future growth	4 060	(2 983)	(649)	Bedrag behou om toekomstige groei te finansier
Amount required to maintain the purchasing power of the ordinary shareholders' investment		7 043	6 957	Bedrag benodig om die koopkrag van die gewone aandeelhouersbelegging te handhaaf
Historical income retained	4 060	4 060	6 308	Historiese inkomste behou
Balance sheet at 30 September 1977				**Balansstaat op 30 September 1977**
Fixed assets *less* depreciation	28 160	44 512	44 097	Vaste bates *min* waardevermindering
Investments *less* amount written off	99	244	244	Beleggings *min* bedrag afgeskryf
Loan portion of taxation	2 494	2 494	2 142	Leningsgedeelte van belasting
Net current assets	87 003	87 871	93 401	Netto bedryfsbates
	117 756	135 121	139 884	
Less: Preference capital	600	600	668	*Min:* Voorkeurkapitaal
Long term borrowings	30 906	30 906	34 026	Langtermynlenings
Amount set aside for deferred taxation	799	799	599	Bedrag opsy gesit vir uitgestelde belasting
	85 451	102 816	104 591	
Less: Outside shareholders' interest	5 750	6 745	6 371	*Min:* Buite-aandeelhouersbelang
Ordinary shareholders' investment	79 701	96 071	98 220	Gewone aandeelhouersbelegging
Salient comparisons				**Opvallende vergelykings**
Earnings per ordinary share (cents)	35,1	3,9	16,0	Verdienste per gewone aandeel (sent)
Earnings attributable to ordinary shareholders as % of ordinary shareholders' funds at beginning of the year	10,76	0,91	3,65	Verdienste toedeelbaar aan gewone aandeelhouers as % van gewone aandeelhouersfondse aan die begin van die jaar
Ordinary dividend cover	2,05	0,23	0,85	Gewone dividenddekking
Net asset value of ordinary capital per 50c share (cents)	350	422	436	Netto batewaarde van gewone kapitaal per aandeel van 50c (sent)

Results for the year to 30 September 1977	R000	R000	R000	Resultate vir die jaar tot 30 September 1977
Turnover	206 030	216 680	242 915	Omset
Income before tax for the year (note 1)	13 903	6 619	12 269	Inkomste voor belasting vir die jaar (aant. 1)
Taxation	5 162	5 278	8 160	Belasting
Income after taxation	8 741	1 341	4 109	Inkomste na belasting
Less: Applicable to outside shareholders	771	413	459	*Min:* Toedeelbaar aan buite-aandeelhouers
Preference dividends	36	37	41	Voorkeurdividende
Earnings attributable to ordinary shareholders	7 934	891	3 609	Verdienste toedeelbaar aan gewone aandeelhouers
Ordinary dividend	3 874	3 874	4 258	Gewone dividend
Amount retained to finance future growth	4 060	(2 983)	(649)	Bedrag behou om toekomstige groei te finansier
Amount required to maintain the purchasing power of the ordinary shareholders' investment		7 043	6 957	Bedrag benodig om die koopkrag van die gewone aandeelhouersbelegging te handhaaf
Historical income retained	4 060	4 060	6 308	Historiese inkomste behou
Balance sheet at 30 September 1977				**Balansstaat op 30 September 1977**
Fixed assets *less* depreciation	28 160	44 512	44 097	Vaste bates *min* waardevermindering
Investments *less* amount written off	99	244	244	Beleggings *min* bedrag afgeskryf
Loan portion of taxation	2 494	2 494	2 142	Leningsgedeelte van belasting
Net current assets	87 003	87 871	93 401	Netto bedryfsbates
	117 756	135 121	139 884	
Less: Preference capital	600	600	668	*Min:* Voorkeurkapitaal
Long term borrowings	30 906	30 906	34 026	Langtermynlenings
Amount set aside for deferred taxation	799	799	599	Bedrag opsy gesit vir uitgestelde belasting
	85 451	102 816	104 591	
Less: Outside shareholders' interest	5 750	6 745	6 371	*Min:* Buite-aandeelhouersbelang
Ordinary shareholders' investment	79 701	96 071	98 220	Gewone aandeelhouersbelegging
Salient comparisons				**Opvallende vergelykings**
Earnings per ordinary share (cents)	35,1	3,9	16,0	Verdienste per gewone aandeel (sent)
Earnings attributable to ordinary shareholders as % of ordinary shareholders' funds at beginning of the year	10,76	0,91	3,65	Verdienste toedeelbaar aan gewone aandeelhouers as % van gewone aandeelhouersfondse aan die begin van die jaar
Ordinary dividend cover	2,05	0,23	0,85	Gewone dividenddekking
Net asset value of ordinary capital per 50c share (cents)	350	422	436	Netto batewaarde van gewone kapitaal per aandeel van 50c (sent)

Notes on the group results and financial position adjusted for the effect of inflation

Aantekeninge oor die resultate en finansiële stand van die groep soos aangesuiwer vir die uitwerking van inflasie

1 Income before taxation for the year / Inkomste voor belasting vir die jaar

The difference between the income before taxation on the historical basis and the adjusted basis is made up as follows:

Die verskil tussen die inkomste voor belasting op die historiese basis en die aangesuiwerde basis is soos volg:

	1977 R000	1977 R000	1976 R000	1976 R000	
Historical income before taxation for the year		13 903		18 094	Historiese inkomste voor belasting vir die jaar
Adjustments to convert to C.P.P. rand:					Aansuiwering vir omrekening in H.K.K.-rand:
Stock		(6 272)		(6 092)	**Voorraad**
Net additional charge which arises from restating cost of stock at the beginning and end of the year in C.P.P. rand (note 2)					Netto bykomende debiet wat voortspruit uit hertoning van voorraadkoste aan die begin en einde van die jaar in H.K.K.-rand (aant. 2)
Depreciation		(1 510)		(1 474)	**Waardevermindering**
Additional depreciation based on the higher cost of fixed assets when adjusted to C.P.P. rand					Bykomende waardevermindering gebaseer op die hoër koste van vaste bates wanneer aangesuiwer tot H.K.K.-rand
Net monetary items (note 3)					**Netto monetêre items** (aant. 3)
Gain/(Loss) in purchasing power resulting from the effects of inflation:					Wins/(Verlies) in koopkrag as gevolg van die uitwerking van inflasie:
(a) Preference capital and long term borrowings	3 188		3 274		(a) Voorkeurkapitaal en langtermynlenings
(b) Other items	(2 690)	498	(2 731)	543	(b) Ander items
		6 619		11 071	
Adjustment required to update 1976 C.P.P. figures as originally computed to 1977 C.P.P. rand:					Aansuiwering wat nodig is om die 1976 H.K.K.-syfers soos oorspronklik bereken tot 1977 H.K.K.-rand by te werk:
Variation in inflation indices			1 195		Afwyking in inflasie-indekse
Variation in currency exchange rates			3	1 198	Afwyking in valutawisselkoerse
C.P.P. operating surplus for the year		6 619		12 269	H.K.K.-bedryfsurplus vir die jaar

2 Stock / Voorraad

This charge arises due to the additional funds required to replace the same level of stock held at the beginning of the year in terms of the value of the rand at the end of the year. It is offset to a small extent by revaluing the closing stock in C.P.P. terms

Hierdie debiet ontstaan vanweë die addisionele fondse wat benodig word om dieselfde voorraadpeil wat aan die begin van die jaar gehou is, ooreenkomstig die waarde van die rand aan die einde van die jaar te vervang. Hierdie debiet word in 'n geringe mate teengewerk deur herwaardering van die eindvoorraad in H.K.K.-terme.

3 Net monetary items / Netto monetêre items

Net monetary items comprise preference capital and long term borrowings together with outside shareholders' interest, the amount set aside for deferred taxation and other liabilities, less loan portion of taxation and current assets other than stock.

Netto monetêre items behels voorkeurkapitaal en langtermynlenings tesame met buite-aandeelhouersbelang, die bedrag wat opsy gesit is vir uitgestelde belasting en ander laste, min leningsgedeelte van belasting en bedryfsbates behalwe voorraad.

	R000	R000	R000	R000	
Historical income before taxation for the year		13 903		18 094	Historiese inkomste voor belasting vir die jaar
Adjustments to convert to C.P.P. rand:					Aansuiwering vir omrekening in H.K.K.-rand:
Stock		(6 272)		(6 092)	**Voorraad**
Net additional charge which arises from restating cost of stock at the beginning and end of the year in C.P.P. rand (note 2)					Netto bykomende debiet wat voortspruit uit hertoning van voorraadkoste aan die begin en einde van die jaar in H.K.K.-rand (aant. 2)
Depreciation		(1 510)		(1 474)	**Waardevermindering**
Additional depreciation based on the higher cost of fixed assets when adjusted to C.P.P. rand					Bykomende waardevermindering gebaseer op die hoër koste van vaste bates wanneer aangesuiwer tot H.K.K.-rand
Net monetary items (note 3)					**Netto monetêre items** (aant. 3)
Gain/(Loss) in purchasing power resulting from the effects of inflation:					Wins/(Verlies) in koopkrag as gevolg van die uitwerking van inflasie:
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(b) Other items	(2 690)	498	(2 731)	543	(b) Ander items
		6 619		11 071	
Adjustment required to update 1976 C.P.P. figures as originally computed to 1977 C.P.P. rand:					Aansuiwering wat nodig is om die 1976 H.K.K.-syfers soos oorspronklik bereken tot 1977 H.K.K.-rand by te werk:
Variation in inflation indices			1 195		Afwyking in inflasie-indekse
Variation in currency exchange rates			3	1 198	Afwyking in valutawisselkoerse
C.P.P. operating surplus for the year		6 619		12 269	H.K.K.-bedryfsurplus vir die jaar

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This charge arises due to the additional funds required to replace the same level of stock held at the beginning of the year in terms of the value of the rand at the end of the year. It is offset to a small extent by revaluing the closing stock in C.P.P. terms

Voorraad

Hierdie debiet ontstaan vanweë die addisionele fondse wat benodig word om dieselfde voorraadpeil wat aan die begin van die jaar gehou is, ooreenkomstig die waarde van die rand aan die einde van die jaar te vervang. Hierdie debiet word in 'n geringe mate teengewerk deur herwaardering van die eindvoorraad in H.K.K.-terme.

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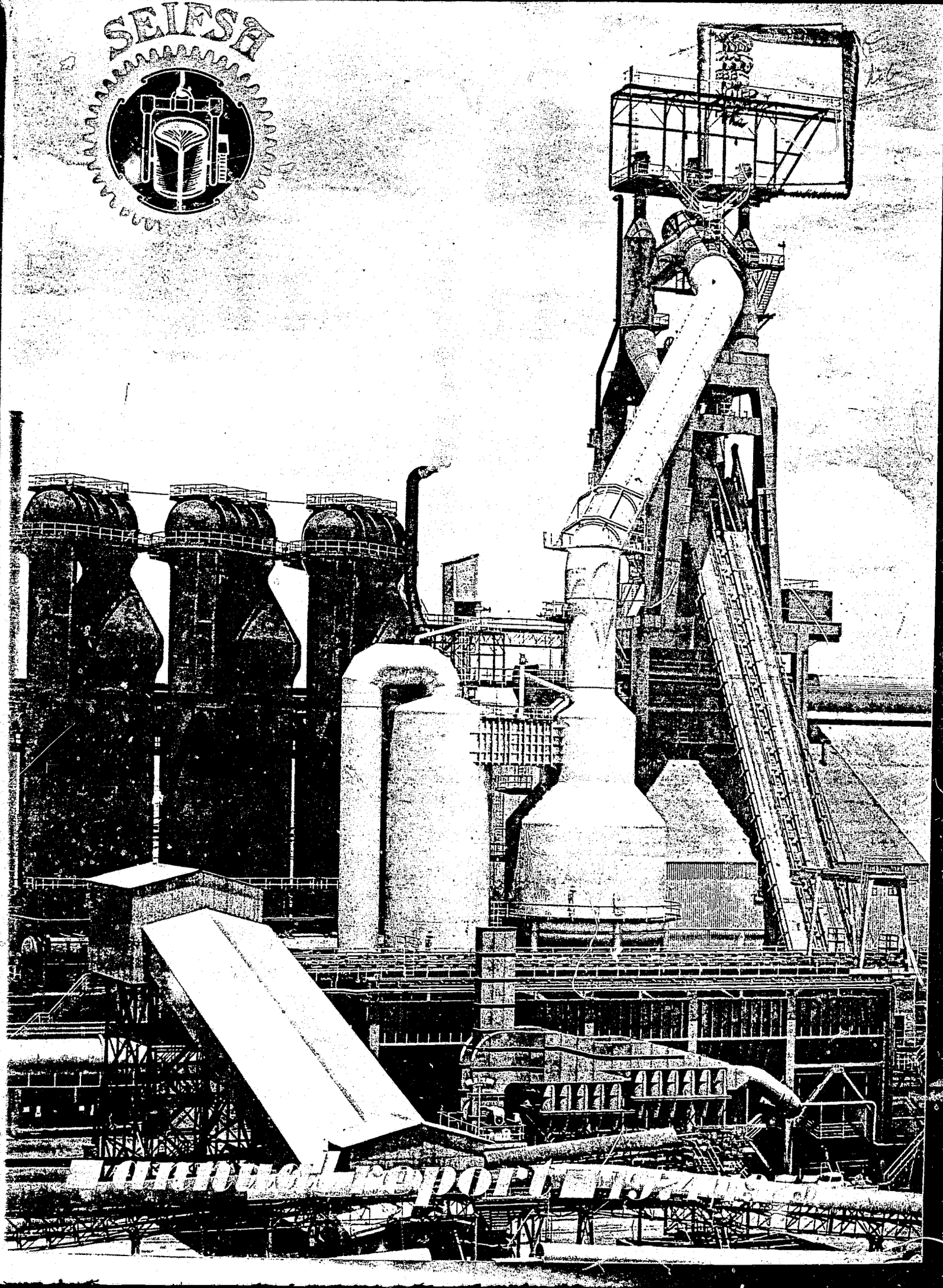
SEIFSA



ANNUAL REPORT

The photograph on the cover is of the ISCOR "D" Blast Furnace, which will increase production by more than one million tonnes per annum.

1975/1976
Officers and Board of Management

PRESIDENT:	A. L. Charles
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CO-OPTED TO REPRESENT SEIFSA DIVISIONS:	
Automotive Parts Manufacturing Division:	K. B. Wheelhouse
Electrical, Electronics, Telecommunication and Allied Industries Division:	J. W. Nelson
Engineering Industries Division:	A. L. Snell
Foundry Industry Division:	J. E. D. Greenhorn
Iron and Steel and Ferro Alloys Division:	J. P. Coetzee
Manufacturing Industries Division:	S. W. Knobel
Plastics Industries Division:	P. S. Kay
DIRECTOR:	Dr. E. P. Drummond

HEAD OFFICE	P.O. Box 1338, Johannesburg 2000.
DIVISIONAL OFFICES	
CAPE	P.O. Box 1536, Cape Town, 8000.
NATAL	P.O. Box 1300, Durban, 4000.
BORDER	P.O. Box 27, East London, 5200.
MIDLANDS	P.O. Box 2221, Port Elizabeth, 6000.
TRANSVAAL	P.O. Box 1338, Johannesburg, 2000.

Members of the Council

The SEIFSA Council is composed of representatives and alternates of Associations and Divisions within SEIFSA, together with persons specially appointed under the relevant provisions of the Federation's Articles of Association.

NAME	COMPANY
Amm, M. (Alternate)	Hargram Engineering (Pty) Limited
Bailey, R. E.	Haggie Steel Ropes Limited
Baron, R. (Alternate)	C. R. C. Engineering (Pty) Ltd.
Baxter, N. D. (Alternate)	Dorman Long Vanderbijl Corp. Limited
Beard, J. P. (Alternate)	Tarson Burglar Alarms (Pty) Ltd.
Beukes, W. J. (Alternate)	Union Steel Corp. (of South Africa) Ltd.
Black, J. A.	Otis Elevator Company Limited
Booth, D. H. (Alternate)	Scottish Cables (South Africa) Limited
Boustred, W. G.	Scaw Metals Limited Highveld Steel and Vanadium Corporation Limited
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Bramwell, J. E. D.	Roberts Construction Company Limited
Brown, W. P.	Scaw Metals Limited
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Burle, R. M. (Alternate)	Castle Brass Works (Pty) Limited
Campbell, C. V. (Alternate)	Steeledale Reinforcing & Trading Co. Ltd.
Chapman, D.	Irvine Chapman & Co. (Pty) Ltd.
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Chaskelson, J.	Steelcraft Manufacturing Co. (Pty) Ltd.
Clewlow, W. A. M.	Barlows Television Company
Coetzee, J. P.	S.A. Iron & Steel Industrial Corp. Limited
Coningsby, J.	Elliott Machine Tools (Pty) Ltd.
Cowan, I.	Automatic Burglar Alarms (Pty) Limited
Crawford, K. J.	Huletts Aluminium Limited
Dempster, P. L. (Alternate)	General Mining & Finance-Korporasie Beperk
de Villiers, L. C. J.	S.A. Iron & Steel Industrial Corp. Limited
de Waal, J. C.	Union Steel Corporation (of South Africa) Ltd.
Dietzel, E. H.	Repco South Africa (Pty) Limited
Dreyer, E. H.	Scaw Metals Limited
Ellis, C. D.	Dorman Long Vanderbijl Corporation Limited
Emanuel, L. J. (Alternate)	Defy Industries Limited
Ewer, G. A. (Alternate)	R. S. Trivett & Co. (Pty) Ltd.
Ferry, G. E.	Atlantic Foundry (Pty) Limited
Fiander, C. S. (Alternate)	Airtec Davidson (Pty) Limited
Fisher, N. E.	Kilpatrick South Africa (Pty) Ltd.
Flinn, J. A.	Mather & Platt (S.A.) (Pty) Limited
Fox, R. A. (Alternate)	Standard Brass, Iron & Steel Foundries Ltd.
Godwin, H. A.	Stewarts & Lloyds of South Africa Limited
Goldman, M. (Alternate)	Steelbrite Industries (Pty) Ltd.
Gray, D. I.	Standard Telephones & Cables (S.A.) (Pty) Ltd.

Greenhorn, J. E. D.	Light Castings (Pty) Limited
Grobbelaar, N. (Alternate)	Hall Longmore & Company Limited
Grobler, W. H. (Alternate)	Skefko (Welkom) Limited
Gruss, A. I.	Metal Sales (Benoni) (Pty) Limited
Ham, D. J. (Alternate)	Searle-Bush Africa Limited
Haggie, I. S.	Haggie Steel Ropes Limited
Hendler, S. (Alternate)	Hendler & Hendler (Pty) Limited
Herr, C. M.	Jacks Fencing & Engineering Works
Hess, J. M. (Alternate)	Non-Ferrous Metal Works (Tvl) (Pty) Ltd.
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Hindry, A. J.	Rapid Allweiler Pump & Engineering Co. (Pty) Ltd.
Holleran, M. T.	Allied Electric (Pty) Limited
Holsteyn, H. W. (Alternate)	Bencor (Pty) Limited
Howarth, H. J.	Cadac (Pty) Limited
Hutten, H. C. H.	S.A. Iron & Steel Industrial Corp. Limited
Hyslop, L. D.	Flather Bright Steels (Pty) Ltd.
Jackson, K. (Alternate)	Dorman Long Vanderbijl Corp. Limited
Joubert, H.	General Erection Co. (Pty) Ltd.
Kay, P. S.	Monoplast
Kearney, Dr. J. P.	AMCOR Limited
Kearney, P. L.	BESCO Transvaal
Kerr, I. F. (Alternate)	R. Hunter & Co. (Pty) Limited
King, T. M.	Stewarts & Lloyds of South Africa Limited
Kirkwood, W. E.	Constructional Engineering Association
Klip, C.	Cape Steel Construction Co. (Pty) Ltd.
Knight, T. E. (Alternate)	Rand Carbide Limited
Knobel, S. W.	Lasher Tools (Pty) Limited
Knoll, Dr. L. B.	Massey-Ferguson (S.A.) Limited
Krohn, O. E.	Fry's Metals Limited
Krüger, Dr. C. M.	ASEA Electric South Africa Limited
Kuttner, E. (Alternate)	Consol Plastics (Pty) Limited
Lee, D. L.	Bright Metals (Pty) Limited
Lion-Cachet, D.	Durab Industries (Pty) Limited
Ludeman, R.	Bartons Tube & Conduits Limited
McCormick, J. C.	Josiah Parkes & Sons (South Africa) Ltd.
McKenna, P.	Mather & Platt (S.A.) Limited
MacKie, E. V.	James Brown & Hamer Limited
MacWhirter, G. A.	Otis Elevator Company Limited
Makepeace, W. (Alternate)	Wil-Make (Pty) Limited
Manoim, C. (Alternate)	Switchcraft Limited
Mason, R.	SAFIM Manufacturing Limited
Mears, W.	Woodhead-Kempo Manufacturers (Pty) Ltd.
Moore, A. (Alternate)	Albert Moore (Pty) Limited
Morrison, W. L.	Stewarts & Lloyds of South Africa Limited
Mostert, M. (Alternate)	Burglar-Proofing & Wrought Iron Co. (Pty) Ltd.
Nelson, J. W.	Bonar Long NTC (S.A.) (Pty) Ltd.
Oelsen, Dr. O. (Alternate)	Dunswart Iron & Steel Works Limited
Osler, T. (Alternate)	Ferrovorm Limited — Alberton Foundry Division
Pastorino, A. (Alternate)	Steeledale Mesh (Pty) Limited
Patterson, W. D.	Schindler Lifts S.A. Limited
Per, S.	Jeppe Plumbing & Sheet Metal Mnfrs. (Pty) Ltd.
Pitchford, E. R. (Alternate)	Ussher Inventions (Pty) Ltd.
Place, C. E. S.	National Bolts Limited
Rae, J.	McKechnie Bros. S.A. (Pty) Ltd.
Randell, W. N.	African Cables Limited
Reid, W. K. (Alternate)	Electro Plating Co. (S.A.) (Pty) Ltd.
Reynolds, I. W.	Otis Elevator Company Limited
Rice, F. V.	Umgeni Iron Works (Pty) Ltd.
Rios, J. F. (Alternate)	Cape Engineers & Founders Association
Rose, R.	Industrial Conveyors (Pty) Limited
Roseveare, H. K.	Hall-Thermotank Africa Limited

Rubin, H.	Fuchs Electronics (Pty) Limited
Russell, J. M.	Globe Engineering Works Limited
Ryser, E.	Ernest Lowe Manufacturing (Pty) Ltd.
Sayce, C. P.	G. K. N. Twisteel (Pty) Limited
Sceales, P. W.	Dorman Long Vanderbijl Corp. Limited
Schalkwyk, P. L.	C. & C Electro-Plating Works (Benrose) (Pty) Ltd.
Schulz, P. F. W.	Consolidated Brassfoundry (Pty) Ltd.
Scott, E. R.	Edac (Pty) Limited
Seawright, R. M. F.	The Steel Engineering Company Limited
Shaw, R. T.	Cementation Engineering (Pty) Limited
Short, N. G. (Alternate)	McKechnie Bros. South Africa (Pty) Ltd.
Simmons, J.	Union Carriage & Wagon Co. (Pty) Ltd.
Slome, B. (Alternate)	Television & Electrical Distributors (Pty) Ltd.
Smith, D.	Clark Trane (Pty) Limited
Smith, H. S.	Globe Engineering Works Limited
Smith, R. D. (Alternate)	Plessey South Africa Limited
Smith, S. H.	Modern Engineering Works (Pty) Ltd.
Snell, A. L.	Barlows Heavy Engineering Limited
Spence, W. F.	Stewarts & Lloyds of South Africa Limited
Stalcher, P. E.	Metalloys Limited
Thompson, W. D. (Alternate)	SAFIM Manufacturing Limited
Thomson, D. D.	The Reinforcing Steel Co. (Pty) Ltd.
Throssell, R. C.	Throssell Engineering Co. (Pty) Ltd.
Trotskie, J.	Siemens (Pty) Limited
Tudhope, T. W. (Alternate)	Dorman Long Vanderbijl Corp. Limited
van den Berg, A. J.	Industrial Development Corp. of S.A. Limited
Wentzel, I. F.	McKinnon Chain (S.A.) (Pty) Limited
Wheeler, P.	General Mining & Finance-Korporasie Beperk
Wheelhouse, K. B.	DORBYL Metal Pressings Limited
Whitby, I. L.	Nordberg Manufacturing Co. (S.A.) (Pty) Ltd.
Widman, M. M. (Alternate)	Express Lift Co. S.A. Limited
Wilde, F. C. (Alternate)	Borg-Warner S.A. (Pty) Limited
Wilson, Dr. B.	United Radio & Television (Pty) Ltd.
Young, A. S. (Alternate)	Port Elizabeth Engineers' Association

CO-OPTED TO REPRESENT SEIFSA DIVISIONS:

Automotive Parts Manufacturing Division:	K. B. Wheelhouse
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Engineering Industries Division:	A. L. Snell
Foundry Industry Division:	J. E. D. Greenhorn
Iron and Steel and Ferro Alloys Division:	J. P. Coetzee
Manufacturing Industries Division:	S. W. Knobel
Plastics Industries Division:	P. S. Kay

President's address

Address of the President, Mr. T. M. King delivered to the Thirty-Second Annual General Meeting of the Steel and Engineering Industries Federation of South Africa held in the Board Room, First Floor, Metal Industries House, 84 Marshall Street, Johannesburg, on Thursday, 23rd October, 1975 at 12 noon.

Before reviewing the affairs and activities of SEIFSA during my presidential year, I should like to give you a few pertinent facts and figures to illustrate the magnitude of the contribution which SEIFSA industries make to the economy of the Republic of South Africa.

The gross output of the Metal and Engineering Industries sector of the economy which now amounts to R4 810 million per annum represents 20% of the gross domestic product of the country.

The number of work people of all races employed in our industries is 467 000, which is just over a third of the total manpower engaged in all manufacturing industry in the country.

Last year our industries exported products to the value of R450 million but, as in previous years, the bulk of our exports of manufactured products, as opposed to ferro-alloys, pig iron and other basic products, was to our immediate neighbours in Africa.

The Federation continues to participate in the deliberations of the Prime Minister's Economic Advisory Council and of its ad hoc sub-committees, including the committee dealing with the Better Utilisation of Manpower.

The Federation is a signatory of the Collective Campaign against Inflation Manifesto signed in Pretoria on 7th October, 1975, about which I shall have more to say later.

During my year of office from November 1974 to October 1975 there was considerable disparity in the activity of the various sectors of the metal and engineering industries group.

Those sections engaged in supplying infra-structural developments did not experience the sharp downtrend encountered by the sectors associated with the building industry, the automotive industry and the domestic appliance industry.

Overall, however, the volume of forward orders appears to be shrinking and, as a consequence, despite the continuing shortage of skilled and semi-skilled labour, the amount of overtime being worked is decreasing.

As in the previous year, inflation, partly imported and partly self-generated, caused a sharp rise in the general cost structure of our industries.

During the year the steel supply position improved. Controlled importations plus additional local production facilities contributed to this betterment.

In the short term, a reduced demand from certain of the steel fabricating sectors will improve the availability of local steel and the steel importation scheme is therefore being phased out.

In the longer term, the number of important infra-structure development programmes announced by Government will increase the demand for steel from the constructional and heavy engineering sectors.

The Federation monitors continually the amount of new fixed investment taking place in our group of industries. In monetary terms, the capital expenditure of SEIFSA industries over the last two years has been —

1973 R571 million of which R457 million was by the basic metal industries and R114 million by the metal fabricating and engineering industries.

1974 R757 million of which R584 million was by the basic metal industries and R173 million by the metal fabricating and engineering industries.

The estimated figures for 1975 are —

1975 R996 million of which basic industries will absorb R769 million and fabricating industries R227 million.

The Export Promotion Scheme for steel products continued to operate reasonably well. As a result of experience gained in the operation of the scheme, modifications were made to it.

An ad hoc committee has been appointed to examine aspects of the value-added formula which are not considered satisfactory by some users.

SEIFSA continued to be deeply involved in technical training and education. Since 1970, when the Metal and Engineering Industries Education and Training Fund was established, R14 million has been paid in training grants. These grants which are 100% tax free to the recipient companies have encouraged the development of in-company training schemes.

Tax concessions related to the expense of training Black workers continue on a basis of 100% of training costs of Black workers in White areas and on a basis of 125% of training costs of Black workers in growth point areas. The establishment, under the auspices of the Department of Bantu Education, of training centres for Black workers in White areas, has made steady progress. Some of the training centres are already operational and others are nearing completion.

At the end of 1974 SEIFSA industries had 13 375 apprentices in training.

The content of existing apprentice training courses was kept under constant review.

The National Apprenticeship Committee for the Metal Industries initiated a study of the practicability of shortening the period of apprenticeship training.

Apprentice wage rates were increased by 15% from 2nd June, 1975.

The Journeyman Recognition Scheme continued to function. Including those presently in training, 6 763 men have participated in this scheme.

The SEIFSA Technological Fund continued to provide bursaries at South African universities and at colleges for advanced technical education.

Since the establishment of the scheme, R1,25 million has been paid to the holders of bursaries, of which there are 574 currently in operation.

The massive infra-structure development programme, which I mentioned earlier in this report, will, undoubtedly, aggravate the existing problem of skilled labour shortage. Action is being taken to introduce intensive in-plant training and re-training programmes in the sectors concerned.

Whether these training schemes will produce an adequate supply of skilled workers is problematical, and it would seem that more positive action related directly to anticipated needs should be required of contractors engaged in the infra-structure schemes.

The changing pattern of industrial relations in South Africa was recognised by SEIFSA, which, during the year established, as part of its organisational structure, a Bantu Labour Unit aimed at assisting members of SEIFSA to achieve improved lines of communication between Black workers and management. Representations were made to the authorities regarding the Bantu Labour Relations Regulation Act as a result of which indications are that changes in the application of the Act will be made to ensure that there will be some form of direct participation by Black workers when the working conditions of Black workers are being discussed and negotiated under the Industrial Council structure. The necessity of having direct Black worker participation in negotiating

meetings has been advocated by SEIFSA for some time and the changes contemplated in the implementation of the Act are welcomed as a progressive step in our industrial relations with Black workers.

Our industrial relations are conducted under the aegis of the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry.

During the year an investigation was undertaken into the methods of operation and the constitution of the Council.

This investigation was found to be necessary because of the number of SEIFSA associations and trade unions which presently participate in the National Industrial Council and the likelihood that additional associations would seek membership of the Council.

A report on the investigation has been laid before the parties to the Council and the recommendations contained in the report will be considered by the trade unions and employer associations towards the end of this year.

The Industrial Agreements relating to SEIFSA industries were amended with effect from 2nd June, 1975. Basic wage rates were increased by percentages varying from 8,6% for the highest category of skilled artisans to 15,4% for unskilled workers. In addition, the revised agreement incorporated 'across the board' increases with set-off arrangements.

The improvements to basic wage rates were conceded as a result of an undertaking given by employers in the April/May 1974 negotiations that the remuneration of all employees would be re-examined if and when the consumer price index increased by 10%. Early in 1975 the trade unions requested employers to implement the undertaking given in 1974. The revised agreements became effective from 2nd June, 1975 and are binding until June 1976.

Simultaneously with the introduction of the revised agreements on 2nd June, 1975, the Metal Industries Group Life and Provident Fund was converted into a contributory Pension Fund, with employers and employees each paying a contribution of 5% of pensionable remuneration.

The Pension Fund provides for pension benefits, widows' benefits and life cover of two years' salary. Previous entitlements relating to the fund prior to 2nd June, 1975 have been entrenched and will augment pension benefits available from the new contributory fund.

The Metal Industries Group Pension Fund (a separate fund) for lower paid workers continues on a non-contributing basis for employees, while employers contribute 5% of pensionable remuneration. Life cover has been increased to one year's salary.

The inflationary conditions experienced in the economy during the year are unprecedented in South Africa. On an annual basis the rate of inflation during the period was 14%. It is interesting to note that the depreciation rate on machinery, plant and equipment in the Metal Fabricating and Engineering Industries is now running at an average of 17%. Whilst this rate attempts to cater for technical obsolescence and a degree of higher cost replacement, the rate is quite inadequate to provide for re-investment under the high rates of monetary inflation being encountered today.

The cost of funds to finance investment programmes is high and is likely to remain so. The liquidity of companies has been put under severe pressure in meeting higher wage and salary bills and in funding normal inventories of raw materials and work in progress.

Whereas the need to stimulate capital investment has been recognised by the introduction of increased tax investment allowances still further relief of the tax burden on industry is necessary if the private enterprise system is to survive and if South African industry is to escape the creeping socialism and nationalisation of industry encountered in other countries where deliberately or not Governments have failed to recognise the debilitating effect on industry of a high rate of inflation and have failed or hesitated to introduce fiscal and monetary policies which will enable industry to preserve the purchasing power of its working capital and enable industry also, in real growth situations, to embark with confidence on new fixed investment.

The concepts involved in the various methods of 'inflation accounting' are controversial, but if the stable door is not to be bolted after the horse has fled, there is an urgent need to reach a conclusion on the matter and to take positive action to afford relief to industry.

Urgent action is also necessary to clarify what appears to be mutually inconsistent economic policies. The high interest rate loans announced by Government in August, coupled with the campaign against inflation manifesto of 7th October are deflationary, while the Rand devaluation of 22nd September is growth orientated and could be the origin of a further bout of inflation.

It is unfortunate that confusion and uncertainty are prevalent and that the manifesto is being labelled by certain commentators as being 'naive' and unlikely to succeed.

It would be a great pity if the manifesto were to fail entirely because of lack of an unequivocal lead from Government regarding the implementation of the undertakings it gave in the manifesto and because of reluctance by the private sector to give commitment and full support.

On our part we will certainly be giving close attention to productivity, not only at shop floor level, but at

supervisory, middle management and top management levels.

We will give point and urgency to training within the parameters of the constantly changing labour structures which are being evolved, albeit slowly, through ongoing collective bargaining with our trade unions.

We will continue to press for changes in job descriptions and for the re-alignment of jobs within the multi-national structure of our labour force.

We will continue to appreciate socio-economic conditions with particular reference to the progress of Black workers and the need to ensure reasonable living standards, job satisfaction, promotion prospects and improved communication with management.

Our industrial relations philosophy is to maintain an equitable balance across our total labour force and, at the same time, to ensure that the economy of the country is not prejudiced by the inability of our industries to produce the country's requirements of our products because of non-availability of an adequate supply of skills.

In concluding this address I should like to record on your behalf our thanks to the Chairmen and members of — .

The Economic Affairs Committee
The Technical Training Committee
Non-European Affairs Central Committee and its sub-committees
Metal and Engineering Industries Education and Training Board

for the excellent work they have done during the past year.

I should also like, on your behalf, to express my thanks to the Chairmen of the seven functional divisions of SEIFSA and to the office bearers and executive committees of our Associations for their specialist and time-consuming work on behalf of SEIFSA.

Lastly, I should like to thank my Vice-Presidents and the members of SEIFSA Board of Management and Council for their contributions to the work of the Federation during the year and especially for their contributions during the recent labour negotiations.

I should like also to thank the regional associations located in the coastal areas for their co-operation and for their stewardship of the affairs of their areas.

The representatives of these Associations are involved in a considerable amount of travelling on SEIFSA business and this is much appreciated.

It would be remiss of me if I were to close this report without expressing my deep personal thanks and without giving you the opportunity to show your appreciation, to the Director of SEIFSA and his staff for their successful contribution towards the smooth running of the Federation during the year and for dealing in such a professional way with the many problems encountered.

I now have pleasure in moving the adoption of the Report of your Council for the year 1974/1975.

List of Associations, Office Bearers and Executive Committees

Association of Electric Cable Manufacturers of South Africa
Chairman: D. H. Booth
Vice-Chairman: R. E. Owen

Automotive Parts Production Engineers' Association
Chairman: K. B. Wheelhouse
Vice-Chairman: W. Mears
Executive Committee: V. Daffonchio, V. F. Fear, S. Fluxman, M. A. Mangold
Co-Opted: R. Mason, D. J. Fourie, H. Botha, D. M. Mecca, R. J. Mott, D. Hutton-Wilson
Coastal Representatives: D. J. A. van Zyl, F. W. Toon, R. Koch

Bright Bar Association:
Chairman: D. L. Lee
Vice-Chairman: J. B. Annegarn
Executive Committee: D. Mackintosh, L. D. Hyslop
Co-Opted: N. J. C. Steyn, D. L. Petters

Cape Engineers' and Founders' Association:
Chairman: H. S. Smith
Vice-Chairman: A. Moore

Constructional Engineering Association:
Chairman: H. Joubert
Vice-Chairman: C. M. Herr
Executive Committee: A. Vowles, M. Cvitanich, C. R. Thorp, W. B. Illman, J. W. R. Smith, D. Chapman, P. Barkhuizen.
Co-Opted: J. H. Wood, D. Kinsley, R. S. Burns, M. M. Powell, D. Kirkman, L. J. Wylie, Dr. A. R. Kemp, R. Domann.

Domestic Appliance Manufacturers' Association of South Africa:
Chairman: G. C. Hare-Bowers
Vice-Chairman: Vacant
Executive Committee: W. Ferguson, E. E. Ashdown, L. Kantor, D. H. H. Stranack, A. P. v.Z. Mostert
Co-Opted: P. R. Hatty, D. N. du Plessis

Representing Industrial Divisions:
Major Domestic Appliance Manufacturers Division:
Chairman: G. C. Hare-Bowers
Vice-Chairman: A. Stewart
Room and Auto Air Conditioners Division:
Chairman: G. C. Hare-Bowers
Vice-Chairman: Vacant
Small Appliance Manufacturers Division:
Chairman: E. E. Ashdown
Vice-Chairman: D. Hindle

East London Engineers and Founders Employers' Association:
Chairman: S. H. Smith
Vice-Chairman: N. D. Baxter
Executive Committee: A. C. Day, G. F. Brown, R. B. Largue, G. P. Midlane, M. Spearpoint, G. S. Leisegang

Edge Hand and Small Tool Manufacturers' Association:
Chairman: S. W. Knobel
Vice-Chairman: E. R. Pitchford
Executive Committee: V. Mijon, L. Morison, J. Viljoen
Co-Opted: H. A. Collins

Electrical Engineering and Allied Industries Association:
Chairman: J. W. Nelson
Vice-Chairmen: C. Manoim, A. L. Charles
Executive Committee: R. A. Goslar, R. G. Southern, F. D. Nash, R. J. F. Sanne, L. Klein, C. C. Swarts, N. Kirschner
Co-Opted: T. W. Tucker

Representing Industrial Divisions:
Rotating Machines Manufacturing Division: K. Worthington
Transformer and Rectifiers Manufacturing Division: R. A. Linnarsson
Electrical Wiring Accessories Manufacturing Division: L. Katz
Electrical Repair Division: W. R. Temple
Erection and Contracting Division: W. Pferdekaemper
Panelboard Manufacturing Division: M. Feldman
Electrical Lighting and Heating Equipment Manufacturing Division: Vacant
Education and Training Division: J. de Walt Trotskie

Electronic Component Manufacturers' Association:
Chairman: E. R. Scott
Vice-Chairman: M. T. Holleran
Executive Committee: E. R. Geyser, J. Chodos
Co-Opted: Dr. K. van Glos, G. Kuijpers, D. Lanigan

Electronics and Telecommunications Industries Association:
Chairman: D. I. Gray
Vice-Chairman: C. J. Ferreira
Executive Committee: J. D. Hitchings, J. Trotskie, H. F. Jacobs, J. van der Linde, Col. W. G. Perkins
Co-Opted: J. S. Theron, H. H. Ferreira, A. Vermeulen, B. D. Cross, J. M. Killick

Representing Industrial Divisions:
Civil Radio and Radar and Mobile Telephone Division: Vacant
Data Systems Division: L. E. G. Lettice

Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape)
Chairman: R. T. Shaw
Vice-Chairman: I. F. Kerr
Executive Committee: C. Edwards, B. Buckley, W. I. Campbell-Pitt, P. Krenkel, B. H. Fell, R. M. F. Seawright, R. J. Crawford-Brunt

Ferro Alloy Producers' Association:
Chairman: P. E. Streicher
Vice-Chairman: T. E. Knight
Executive Committee: J. C. Hall, E. R. Baggott, R. W. Zille, M. P. Wessels, A. L. Melvill, L. A. Kok, J. M. Meyer, M. Harris, Dr. P. W. Clark, P. J. Muller

Fire Protection Industries Association of South Africa:
Chairman: J. A. Flinn
Vice-Chairman: J. Bowen
Executive Committee: C. W. Dickson, A. G. Ventress
Co-Opted: J. Capper, J. Ponchia, R. G. Begg

Gas Cleaning Equipment Suppliers' Association of South Africa:
Chairman: J. K. Bubenzer
Vice-Chairman: J. Ashton
Executive Committee: P. J. Vermunt, R. Bollerhey, D. A. Tuck, C. D. Craig, A. L. Falletisch

Gate and Fence Manufacturers' Association of the Transvaal:
Chairman: C. M. Herr
Vice-Chairman: M. Mostert
Executive Committee: L. S. Klotz, G. Harrop-Allin (Snr.), N. Sackstein

Heavy Engineering Manufacturers' Association:
Chairman: A. L. Snell
Vice-Chairman: K. Jackson
Executive Committee: R. M. F. Seawright, V. N. N. Pougnet, K. P. O. Frykberg, T. E. Holmes, B. D. Quigley, F. Broderick, W. Harrison

Locksmith Employers' Assocation of South Africa:
Chairman: W. F. Schneeberger
Vice-Chairman: A. Green
Executive Committee: W. H. Austen, G. J. Beecroft, N. Rakow
Co-Opted: G. D. Reynolds

Machine Engravers' Association:
Chairman: H. Rothschild
Vice-Chairman: M. J. Johnston
Executive Committee: J. C. Maizey, H. Maurer, R. J. Maizey, A. Hubner, M. Black

Materials Handling and Construction Plant Association of South Africa:
Chairman: R. Rose
Vice-Chairman: Vacant
Executive Committee: G. L. Hall, J. A. Anderson, J. Stirling, K. N. J. Yates, P. L. Malan
Co-Opted: R. Mason

Natal Engineering Industries Association:
Chairman: R. C. Throssell
Vice-Chairman: K. J. Crawford

Representing Industrial Divisions:
Structural Marine and General Engineering Division: E. V. MacKie, H. Oliver
Foundry Group Division: K. H. Coombs, F. V. Rice, M. G. Thomson, A. Cluett, E. C. de Jager, L. J. Emanuel
Sheet Metal Engineering Division: F. Howes, G. W. Turner, F. W. Toon
Light Engineering Division: Vacant
Electrical Engineering Division: G. A. Ewer
Reinforced Concrete Engineering Division: D. Simpson
Non-Ferrous Division: B. Lazarus, K. J. Crawford
Plastics Division: E. G. Simpkins, C. D. Siepman
Panelboard Manufacturers Division: N. Larmont

Hydraulics and Pneumatics Association:
Chairman: E. Ryser
Vice-Chairman: N. Hewitt
Executive Committee: R. Hancox, H. Heiss, N. R. McCallum, B. Shea

Iron and Steel Producers' Association of South Africa:
Chairman: J. P. Coetzee
Vice-Chairman: L. Boyd
Executive Committee: P. C. H. Hutten, Dr. J. P. Kearney, Dr. O. Oelsen
Co-Opted: W. G. Boustred, H. R. Curnick, L. C. J. de Villiers, J. C. de Waal, E. H. Dreyer, A. L. Evans, H. S. Gray, N. J. Grobler, G. E. Holtshausen, E. Jackson, C. J. M. Prinsloo, A. L. Melvill, J. C. Steenkamp, G. M. Stott, R. K. Tait, A. N. Turner, J. H. Vorster

Lift Engineering Association of South Africa:
Chairman: W. D. Patterson
Vice-Chairman: I. W. Reynolds
Executive Committee: F. D. Nash, J. L. Ligeti
Co-Opted: R. P. Hindley

Light Engineering Industries Association of South Africa:
Chairman: J. C. McCormick
Vice-Chairman: I. F. Wentzel
Executive Committee: J. P. Newman, W. Mears, P. S. Kruger
Co-Opted: D. Mackintosh, A. K. Swain

Representing Industrial Divisions:
Metal Window and Door Manufacturing Division: J. J. G. Grobler
Light Stampings and Forgings Division: J. P. Newman
Wire Products Division: T. J. Wearne
Hardware Manufacturing Division: J. Viljoen
Chain Manufacturing Division: H. M. E. Lentz
Light Fabricating Division: C. A. L. Meter
Lock and Latch Manufacturing Division: Vacant
Die Castings and Extrusions Division: D. Rowlands

Non-Ferrous Metal Industries Association of South Africa:
Chairman: A. I. Gruss
Vice-Chairman: J. M. Hess
Treasurer: Vacant
Executive Committee: E. D. Wahlhaus, G. Goslar, B. Lazarus
Co-Opted: S. Carne

Plastics Manufacturers' Association of South Africa:
Chairman: P. S. Kay
Vice-Chairman: E. Kuttner
Executive Committee: D. J. Jacobs, D. G. Owens, G. I. Kopp, A. H. Hofmeyr, C. B. Davis
Co-Opted: N. Mitchell, T. W. W. Scarborough, J. Rubenstein, R. G. Harrison, H. Burnhardt

Plumbers and Engineers Brassware Manufacturers' Association:
Chairman: P. F. W. Schulz
Vice-Chairman: R. M. Burle

Port Elizabeth Engineers' Association:
Chairman: E. H. Dietzel
Vice-Chairman: F. C. Wilde

Precision Manufacturing Engineers' Association:
Chairman: R. M. F. Seawright
Vice-Chairman: W. Makepeace
Executive Committee: K. S. Rice, L. J. Sawyer, J. C. Moodie, B. H. Fell

Pressure Vessel Manufacturers' Association of South Africa:
Chairman: H. J. Howarth
Vice-Chairman: C. S. Fiander
Executive Committee: A. R. Pearson, L. R. Harris, A. N. Berman, A. H. Goodwin, P. Lombardi, M. J. Rawlins, G. Carter
Co-Opted: P. Kruger

Radio, Appliance and Television Association of South Africa:
Chairman: G. W. G. Brodie
Vice-Chairman: E. H. Smith
Executive Committee: E. S. Patz, H. A. R. Smits, P. W. Verdult, M. R. Fuchs, M. J. Gee

Sheet Metal Industries Association of South Africa:
Chairman: S. Per
Vice-Chairman: S. Hendler
Executive Committee: J. Menachemson, J. P. Shnaier, L. E. Rose, N. Smith
Co-Opted: D. Krost, B. Blecher, D. C. O'Brien, H. S. Ostroff

South African Agricultural and Irrigation Machinery Manufacturers' Association:
Chairman: R. Mason
Vice-Chairman: Vacant
Executive Committee: W. Bergh, L. Lee, C. J. Luther
Co-Opted: R. B. Buttrick, D. A. J. Foord, E. G. Metcalfe, W. B. Trehaeven, W. D. Thompson

South African Air Conditioning Equipment Manufacturers' Association:
Chairman: D. Smith
Vice-Chairman: D. J. Ham
Executive Committee: D. M. Waldron, J. I. Hancock
Co-Opted: A. L. Ferneyhough

South African Association of Shipbuilders and Repairers:
Chairman: H. S. Smith
Vice-Chairman: R. C. Throssell

South African Burglar Alarm Systems Association:
Chairman: I. Cowan
Vice-Chairman: J. P. Beard
Executive Committee: R. M. Horsley, A. Roux, E. Wenger

South African Electroplating Industries Association:
Chairman: P. L. Schalkwyk
Vice-Chairman: W. K. Reid
Executive Committee: W. Cassel, D. M. Nel, I. H. Lauder
Branch Representatives: B. Wilson, L. Sebba

South African Fabric Reinforcement Association:
Chairman: C. P. Sayce
Vice-Chairman: A. Pastorino
Executive Committee: J. C. Nettleton, D. G. Cheney, P. F. Wintour

South African Fasteners Manufacturers' Association:
Chairman: C. E. S. Place
Vice-Chairman: M. Amm
Executive Committee: J. B. Gray, A. B. Ross, E. Simon, G. Pearson
Co-Opted: H. Botha, H. van Jaarsveld, D. R. Kenning K. E. Bell

South African Hot Dip Galvanisers' Association:
Chairman: W. G. S. Barnett
Vice-Chairman: K. Shamley

South African Industrial Refrigeration and Air Conditioning Contractors' Association:
Chairman: L. S. King
Vice-Chairman: K. H. Klostermann
Executive Committee: N. E. Fisher, R. Baron, J. Howard, L. S. King, M. Vergunst, J. Allan, M. Streeter

South African Lighting Fittings Association:
Chairman: C. Jankelowitz
Vice-Chairman: Vacant
Executive Committee: M. Rabinowitz, T. Gilliland, G. G. Lavery, J. Cabret, S. L. Schaefer

South African Machine Tool Manufacturers' Association:
Chairman: J. Coningsby
Vice-Chairman: H. W. Holsteyn
Executive Committee: A. J. Meuller, E. Faccio, S. Torch
Co-Opted: J. MacOlive, J. D. R. Hugo, H. Swift

South African Production Founders' Association:
Chairman: H. A. Godwin
Vice-Chairman: J. E. D. Greenhorn
Executive Committee: D. S. du Plessis, T. Osler, P. Leach, A. R. Cluett, D. J. van Zyl
Co-Opted: A. Ferreira

South African Pump Manufacturers' Association:
Chairman: P. McKenna
Vice-Chairman: A. J. Hindry

South African Radio Common Carrier Association:
Chairman: R. L. Price
Vice-Chairman: K. Charlton
Executive Committee: I. Subel, Dr. P. M. Collins, B. S. A. Davidson

South African Radio & Television Manufacturers' Association:
Chairman: Dr. B. Wilson
Vice-Chairman: B. Slome
Executive Committee: J. Duffield, H. Seligman, R. A. Williams
Co-Opted: K. J. Townshend

South African Reinforced Concrete Engineers' Association:
Chairman: D. D. Thomson
Vice-Chairman: C. V. Campbell
Executive Commitee: D. Simpson, D. L. Mallows, P. Gillis

South African Tube Makers' Association:
Chairman: R. A. MacKeller
Vice-Chairman: R. Ludeman
Executive Commitee: W. Spotwood
Co-Opted: K. Buhr, L. S. Klotz

South African Valve Manufacturers' Association:
Chairman: J. Nash
Vice-Chairman: B. A. Buckley

South African Wire and Wire Rope Manufacturers' Association:
Chairman: R. E. Bailey
Vice-Chairman: W. J. Beukes

South African Wrought Non-Ferrous Metal Manufacturers' Association
Chairman: O. E. Krohn
Vice-Chairman: N. G. Short
Executive Committee: L. Z. Ospovat, S. F. Malan, G. W. Lazarus
Co-Opted: W. J. Beukes, B. Perrins, J. Hess, B. I. Harris

Steel Kitchen Manufacturers' Association:
Chairman: J. Chaskelson
Vice-Chairman: M. Goldman
Executive Committee: A. Scholtz, C. Krost, E. W. Ebner

Television Aerial Installers' Association of South Africa:
Chairman: M. Ullman
Vice-Chairman: A. Hodgkinson
Executive Committee: J. S. Marais, P. H. Lyons, E. Durkin, R. B. Hartog, O. Friend, J. E. Young

Television Aerial Manufacturers' Association of South Africa:
Chairman: A. J. Hodgkinson
Vice-Chairman: R. B. O'Sullivan
Executive Committee: H. J. Konrad, G. Vloothuis

Television Manufacturers' Association of South Africa:
Chairman: W. A. M. Clewlow
Vice-Chairman: H. Rubin
Executive Committee: B. Slome, H. Ebner, W. Reid, D. G. Fine

Transvaal and O.F.S. Foundry Association:
Chairman: W. P. Brown
Vice-Chairman: R. A. Fox
Executive Committee: E. C. Barber, N. D. Altenkirk, R. A. Boustred, I. F. Kerr, W. J. Beukes, W. A. Hoadley
Co-Opted: D. A. J. Foord, R. J. Crawford-Brunt

STATISTICS

(Released by SEIFSA Statistical Section)

1. SOUTH AFRICA'S IRON AND STEEL AND FERRO ALLOYS' OUTPUT

(Metric Tons)

Year	Iron (Liquid and Pig)	Ferro Alloys and Spiegel Iron
1939	296 300	3 900
1944	463 600	8 200
1949	695 300	13 200
1954	1 171 000	25 900
1957	1 359 600	64 600
1958	1 512 700	69 000
1959	1 703 100	104 400
1960	1 820 800	172 400
1961	2 133 800	196 600
1962	2 227 900	182 300
1963	2 228 800	209 700
1964	2 656 400	230 300
1965	3 271 200	331 700
1966	3 421 900	336 000
1967	3 420 200	358 300
1968	3 775 100	349 500
1969	3 930 700	424 000
1970	3 929 500	429 200
1971	4 009 700	447 800
1972	4 409 100	490 200
1973	4 329 500	555 800
1974	4 620 500	636 200

Year	Open Hearth, Duplex and Oxygen Blown Steel Ingots	Electric Steel Ingots (1)	Steel Ingots: Total
1939	367 800	—	—
1944	483 500	—	—
1949	631 500	—	—
1954	1 264 800	112 000	1 376 800
1957	1 495 600	183 000	1 678 600
1958	1 560 200	210 800	1 771 000
1959	1 617 300	220 800	1 838 100
1960	1 783 400	281 400	2 064 800
1961	2 146 500	282 500	2 429 000
1962	2 270 100	308 100	2 578 200
1963	2 368 700	382 200	2 750 900
1964	2 589 800	412 000	3 001 800
1965	2 651 600	478 000	3 129 600
1966	2 694 800	503 300	3 198 100
1967	3 034 200	568 000	3 602 200
1968	3 308 300	623 600	3 931 900
1969	3 440 800	976 100	4 416 900
1970	3 332 000	1 176 700	4 508 700
1971	3 181 700	1 554 100	4 735 800
1972	3 317 400	1 842 600	5 160 000
1973	3 493 700	1 946 900	5 440 600
1974	3 452 700	2 173 100	5 625 800

(1) Including continuously cast steel billets.

2. SOUTH AFRICAN FOUNDRY PRODUCTION

(Sales tonnage in metric tons)

Year	Steel Castings
1966	101 600
1967	103 500
1968	89 000
1969	89 100
1970	110 400
1971	121 000
1972	120 900
1973	127 500
1974	135 900

Year	Grey and White Iron Castings*	Malleable Iron Castings	Ductile (S.G.) Iron Castings	Iron Castings: Total
1966	186 000	21 100	9 300	216 400
1967	194 600	21 900	11 900	228 400
1968	192 500	25 300	11 500	229 300
1969	201 000	30 300	11 600	242 900
1970	208 200	32 200	12 300	252 700
1971	227 500	38 900	13 000	279 400
1972	211 900	32 300	11 600	255 800
1973	226 600	38 000	13 900	271 000
1974	256 900	41 100	17 500	315 500

*Includes meehanite and other special iron castings.
Excludes ingot moulds produced in steelworks for own use.

Year	Copper and Copper Base Alloy Castings	Aluminium and Aluminium Base Alloy Castings	Other Non-Ferrous Metal Castings	Non-Ferrous Metal Castings: Total
1966	7 460	3 150	1 600	12 210
1967	7 970	3 480	1 880	13 330
1968	7 710	3 860	2 190	13 760
1969	7 990	4 340	2 690	15 020
1970	7 770	4 480	2 680	14 930
1971	7 710	4 390	3 180	15 260
1972	8 160	4 450	3 140	15 750
1973	8 630	3 960	3 030	15 620
1974	9 160	5 530	2 890	17 580

3. COMPOSITION OF HOURLY PAID LABOUR FORCE IN THE METAL INDUSTRIES GROUP

	PERCENTAGE DISTRIBUTION												
CLASS	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
EUROPEANS:													
Artisans	14	14	13	13	13	13	14	13	13	13	12	12	12
Operators, etc.	17	16	15	15	15	14	14	13	13	13	13	12	12
NON-EUROPEANS:													
Semi-skilled	23	22	22	23	22	23	21	24	24	24	26	29	29
Labourers	46	48	50	49	50	50	51	50	50	50	49	47	47
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

4. MONTHLY INDEX OF STATUTORY LABOUR COST IN THE METAL AND ENGINEERING INDUSTRIES

Base: July, 1952 = 1 000

Month	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
January	1443	1522*	1524	1713	1742	1742	1952	1952	2291	2291	2653	2967	3636
February	1443	1522	1524	1736	1742	1809†	1952	1952	2291	2291	2653	2967	3636
March	1443	1522	1524	1742	1742	1976†	1952	1952	2291	2291	2672	2977	3443
April	1443	1522	1524	1742	1742	1973†	1952	1952	2291	2291	2750	2997	3646
May	1458	1522	1524	1742	1742	1941	1952	1952	2291	2300	2750	2997	3646
June	1478	1522	1524	1742	1742	1941	1952	1952	2291	2300	2750	2997	4107
July	1478	1524	1524	1742	1742	1947	1952	1952	2291	2300	2750	2997	4107
August	1478	1524	1541	1742	1742	1952	1952	1966	2291	2300	2750	3409	4107
September	1478	1524	1713	1742	1742	1952	1952	2237	2291	2300	2750	3636	4107
October	1478	1524	1713	1742	1742	1952	1952	2291	2291	2300	2750	3636	
November	1478	1524	1713	1742	1742	1952	1952	2291	2291	2300	2967	3636	
December	1478	1524	1713	1742	1742	1952	1952	2291	2291	2653	2967	3636	
Average	1465	1523	1588	1739	1742	1924	1952	2062	2291	2326	2764	3238	

NOTES— Index of prescribed legal minima of wage rates, contributions to industry funds, etc., in respect of hourly rated employees falling under the Main Industrial Agreement.

† Including lump sum payment. Excluding the lump sum the following indexes apply: February and March — 1742, April — 1762.

* Revised weightings. Based on old weightings: January 1964 = 1490.

5. MONTHLY STEEL PRICE INDEX FIGURES

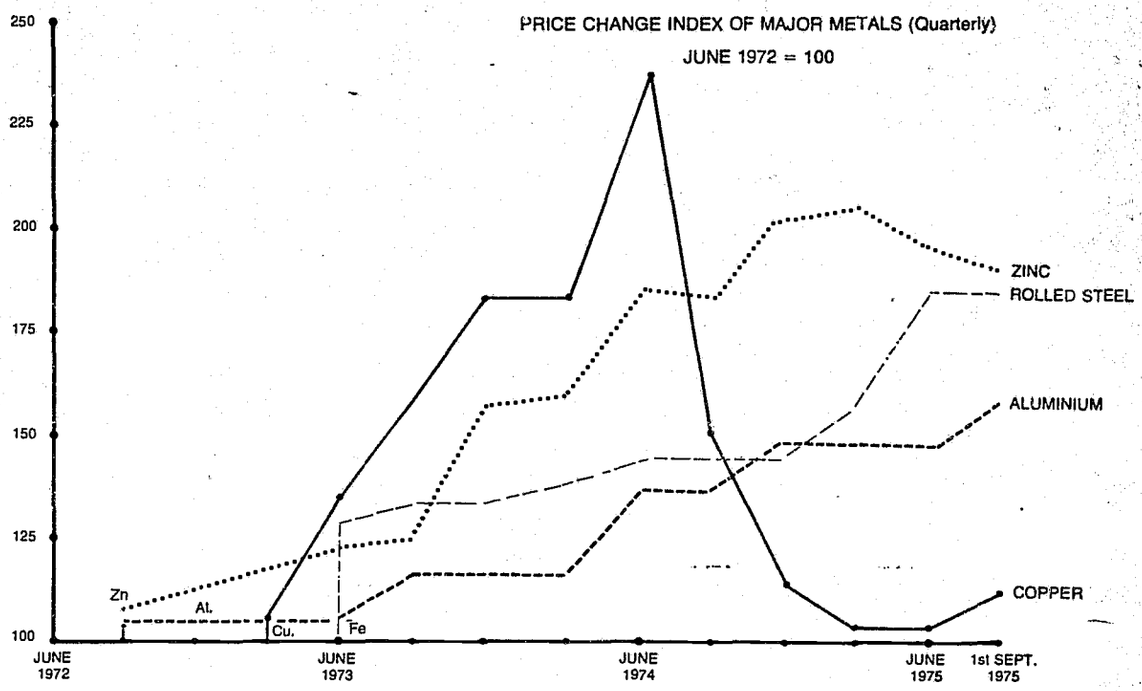
Base: July, 1952 = 1 000

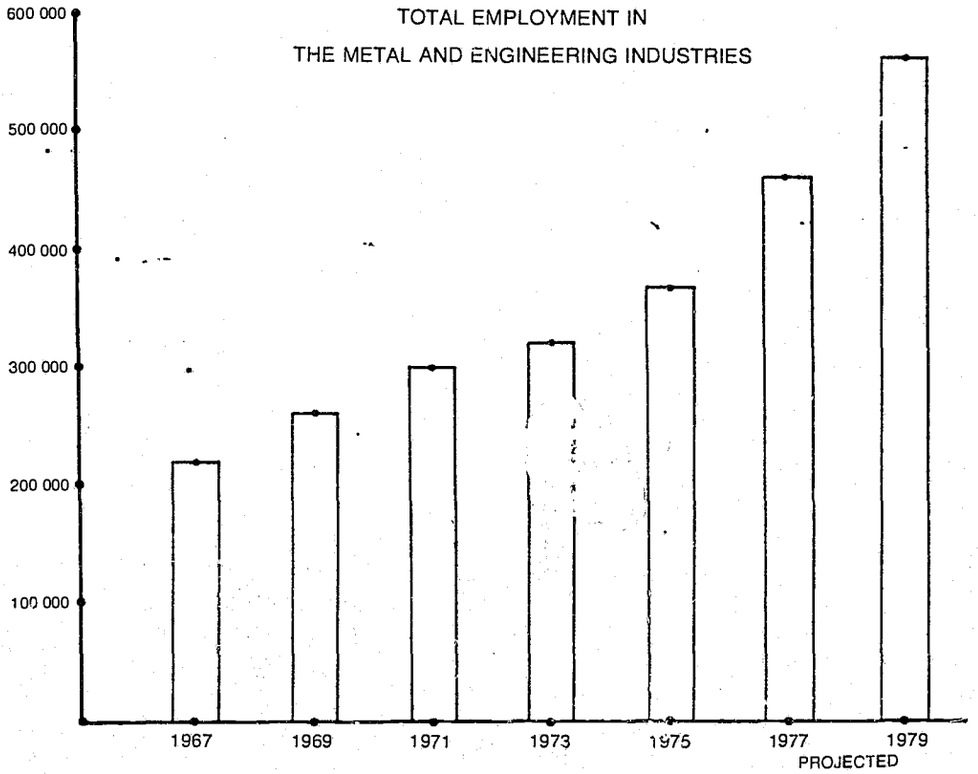
Month	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
January	993	993	1050	1058	1057	1062	1055	1059	1199	1200	1329	1502	2111
February	993	993	1058	1058	1057	1062	1055	1059	1199	1200	1329	1502	2111
March	993	993	1058	1058	1057	1062	1055	1059	1199	1200	1329	1502	2111
April	993	993	1058	1058	1057	1064	1052	1059	1199	1204	1330	1510	2111
May	993	993	1058	1058	1057	1064	1052	1059	1199	1204	1495	1510	2111
June	993	993	1058	1058	1057	1059	1052	1059	1199	1327	1495	1915	2451
July	993	993	1058	1057	1060	1059	1052	1180	1198	1327	1495	1915	2451
August	993	993	1058	1057	1060	1059	1052	1180	1198	1327	1495	1915	2451
September	993	994	1058	1057	1060	1059	1052	1199	1198	1327	1495	1915	2451
October	993	993	1058	1057	1060	1059	1053	1199	1200	1329	1498	1915	
November	993	1027	1058	1057	1060	1059	1053	1199	1200	1329	1498	1923	
December	993	1050	1058	1057	1060	1059	1053	1199	1200	1329	1498	1923	
Average	993	1001	1057	1058	1059	1061	1053	1126	1199	1275	1441	1746	

NOTE—Price index of locally produced commercial steel products (all types) as calculated by ISCOR.

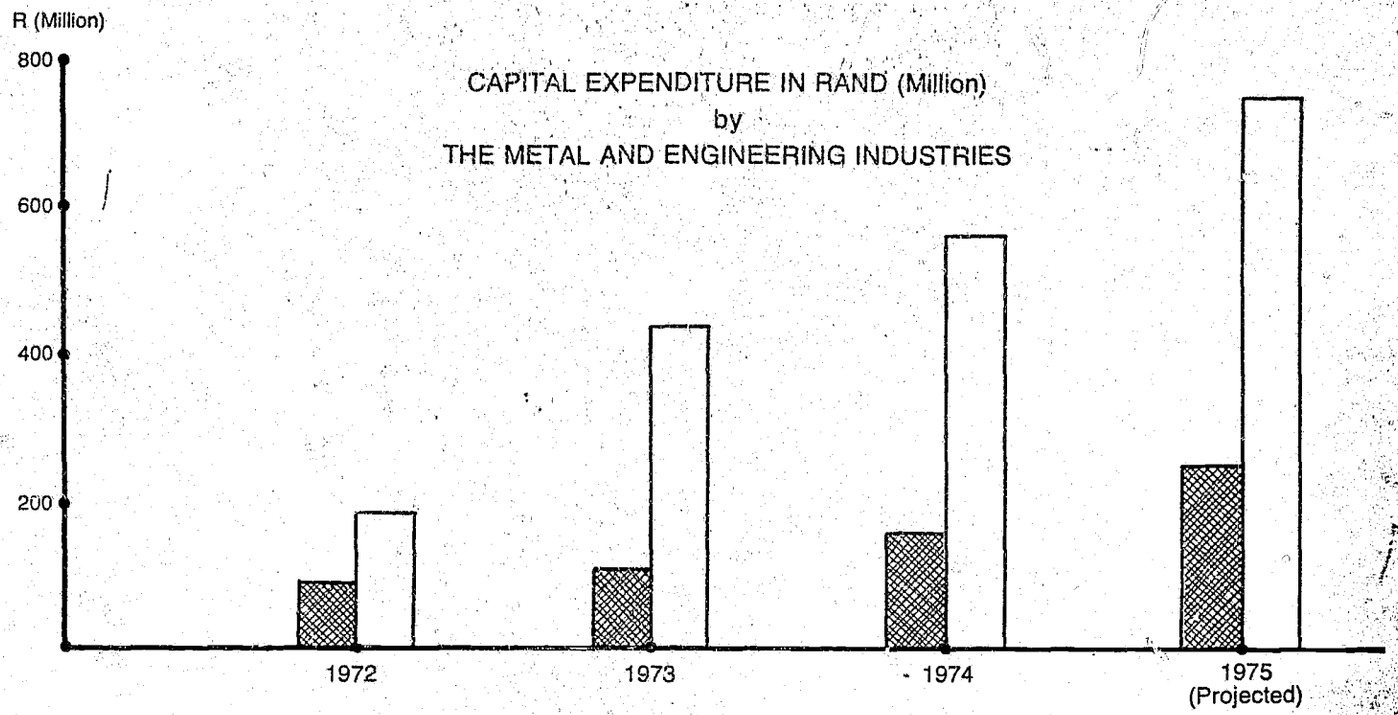
Month	Johannesburg	Near East Rand	Boksburg/ Benoni	Springs/ Brakpan/ Nigel	West Rand	Pretoria	South Transvaal†	Rest of Transvaal*
(a) Journeymen:								
1972: February	174,9	175,9	166,7	173,0	167,1	152,6	153,3	160,2
May	176,6	177,6	169,2	173,3	169,1	153,0	153,3	159,9
August	177,7	178,5	172,3	175,8	171,4	153,6	154,4	159,8
November	179,6	178,6	174,5	176,0	174,8	168,8	164,9	163,0
1973: February	192,9	195,3	189,0	200,9	182,9	172,3	171,9	180,8
May	191,7	194,8	191,6	194,6	183,6	170,8	173,2	180,3
August	193,7	196,1	192,6	203,9	190,1	172,9	178,1	186,9
November	198,7	201,2	196,8	204,1	195,5	182,8	188,5	193,1
1974: February	209,2	210,3	209,3	210,4	205,8	188,0	192,6	198,0
May	212,9	216,6	214,4	219,6	211,0	205,9	206,0	204,2
August	233,8	248,7	247,1	251,6	239,6	210,6	226,9	227,7
November	248,5	251,2	258,8	256,0	251,6	219,7	229,9	230,0
1975: February	259,8	259,5	260,1	278,9	256,7	221,5	230,1	233,6
May	259,0	267,7	266,4	258,7	263,1	224,3	230,7	237,8
August	283,1	277,3	284,9	280,8	285,0	247,4	257,8	253,5
(b) Non-Journeymen (excluding Non-Europeans):								
1972: February	153,4	162,6	156,8	175,2	153,9	141,9	144,5	159,9
May	153,7	159,1	155,4	177,2	160,8	143,4	146,2	163,1
August	151,9	159,0	156,4	177,4	163,5	145,5	147,8	163,2
November	154,9	156,3	160,3	179,1	164,1	164,3	164,8	173,0
1973: February	192,3	166,6	167,8	195,0	178,5	162,8	166,7	174,4
May	192,3	165,6	168,9	191,4	173,8	166,5	167,8	177,3
August	190,2	161,4	171,1	195,1	176,7	168,9	173,7	183,9
November	190,8	177,1	179,1	198,5	184,2	182,6	188,5	194,4
1974: February	192,3	176,9	182,3	200,0	193,6	176,4	186,1	197,2
May	193,7	181,7	188,2	209,6	200,8	192,2	198,9	199,9
August	203,4	203,6	208,3	237,4	215,8	199,1	210,8	220,4
November	205,0	209,2	215,7	242,4	219,3	201,0	214,9	232,2
1975: February	216,2	223,9	224,7	244,4	225,1	202,2	215,1	231,8
May	229,1	221,9	231,9	244,2	231,0	205,0	216,9	236,2
August	247,2	231,2	239,6	269,9	257,0	234,3	243,1	257,4
(c) Non-Europeans — All Classes:								
1972: February	162,2	160,1	160,2	172,5	158,5	150,8	136,8	139,8
May	164,6	168,7	160,5	174,9	157,7	150,9	141,4	138,7
August	167,2	170,6	163,4	176,4	166,4	153,4	138,8	139,8
November	164,7	176,1	165,9	182,5	171,7	172,7	136,0	141,2
1973: February	182,3	181,5	184,7	198,8	167,8	172,1	162,6	160,9
May	183,4	188,0	186,0	195,6	161,8	173,7	180,5	167,9
August	183,4	184,0	187,6	194,0	161,8	175,0	175,7	162,0
November	185,9	187,0	190,2	199,0	171,2	181,8	175,9	160,2
1974: February	223,5	228,8	235,9	231,8	221,6	235,3	204,8	204,6
May	231,1	236,7	244,4	260,3	228,1	254,9	203,9	204,7
August	259,2	287,3	272,6	306,4	275,6	289,8	248,7	234,0
November	270,0	286,0	286,5	303,2	283,3	297,6	253,2	242,9
1975: February	266,4	271,2	292,2	316,9	285,1	298,0	248,3	244,2
May	288,0	300,5	301,7	347,8	306,2	290,0	257,9	251,7
August	308,8	315,9	315,9	370,3	313,9	319,0	285,3	273,9

† Vereeniging and Vanderbijlpark
* Mainly Witbank/Middelburg





Sources. Dept. of Statistics and Economic Development Programme Projections


R (Million)
800
600
400
200
CAPITAL EXPENDITURE IN RAND (Million)
by
THE METAL AND ENGINEERING INDUSTRIES
1972
1973
1974
1975
(Projected)
Basic Metal Industries.
Metal Fabricating and Engineering Industries.

Steel and Engineering Industries Federation of South Africa

Incorporated Association not for Gain

Head Office:
FIRST FLOOR, METAL INDUSTRIES HOUSE
84, Marshall Street
JOHANNESBURG
2001

P.O. Box 1338
Johannesburg
2000

Telegraphic Address: "VITAL"

Phone 834-4021/5
834-6804
834-6806/7
836-6034

ASSOCIATIONS FALLING WITHIN THE FEDERATION

Association of Electric Cable Manufacturers of South Africa.
Automotive Parts Production Engineers' Association.
Bright Bar Association.
Cape Engineers' and Founders' Association.
Constructional Engineering Association.
Covered Conductor Manufacturers' Association.
Domestic Appliance Manufacturers' Association of South Africa.
East London Engineers and Founders Employers' Association.
Edge Hand and Small Tool Manufacturers' Association.
Electrical Engineering and Allied Industries Association.
Electronic Component Manufacturers' Association.
Electronics and Telecommunications Industries Association.
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape).
Ferro Alloy Producers' Association.
Fire Protection Industries Association of South Africa.
Gas Cleaning Equipment Suppliers' Association of South Africa.
Gate and Fence Manufacturers' Association of the Transvaal.
Heavy Electrical Equipment Manufacturers' Association.
Heavy Engineering Manufacturers' Association.
Hydraulics and Pneumatics Association.
Iron and Steel Producers' Association of South Africa.
Lift Engineering Association of South Africa.
Light Engineering Industries Association of South Africa.
Locksmith Employers' Association of South Africa.
Machine Engravers' Association.
Materials Handling and Construction Plant Association of South Africa.
Natal Engineering Industries Association.
Non-Ferrous Metal Industries Association of South Africa.
Plastics Manufacturers' Association of South Africa.
Plumbers and Engineers Brassware Manufacturers' Association.
Port Elizabeth Engineers' Association.
Precision Manufacturing Engineers' Association.
Pressure Vessel Manufacturers' Association of South Africa.
Radio, Appliance and Television Association of South Africa.
Sheet Metal Industries Association of South Africa.
S.A. Agricultural and Irrigation Machinery Manufacturers' Association.
S.A. Air Conditioning Equipment Manufacturers' Association.
S.A. Association of Shipbuilders and Repairers.
S.A. Burglar Alarm Systems Association.
S.A. Electroplating Industries Association.
S.A. Fabric Reinforcement Association.
S.A. Fasteners Manufacturers' Association.
S.A. Hot Dip Galvanisers' Association.
S.A. Industrial Refrigeration and Air Conditioning Contractors' Association.
S.A. Lighting Fittings Association.
S.A. Machine Tool Manufacturers' Association.
S.A. Production Founders' Association.
S.A. Pump Manufacturers' Association.
S.A. Radio Common Carrier Association.
S.A. Radio and Television Manufacturers' Association.
S.A. Reinforced Concrete Engineers' Association.
S.A. Tube Makers' Association.
S.A. Valve Manufacturers' Association.
S.A. Wire and Wire Rope Manufacturers' Association.
S.A. Wrought Non-Ferrous Metal Manufacturers' Association.
Southern African Water and Sewage Plant Suppliers' Association.
Steel Kitchen Furniture Manufacturers' Association.
Television Aerial Installers' Association of South Africa.
Television Aerial Manufacturers' Association of South Africa.
Television Manufacturers' Association of South Africa.
Transvaal and O.F.S. Foundry Association.

ADDRESSES OF AREA DIVISIONS AND BRANCH ASSOCIATIONS WITHIN SEIFSA

CAPE:	P.O. Box 1536, Cape 800	BORDER:	P.O. Box 27, East London. 5200.	O.F.S.:	P.O. Box 420, Bloemfontein. 9300.
NATAL:	P.O. Box 1560, Durban. 4000.	MIDLANDS:	P.O. Box 2221, Port Elizabeth. 6000.	TRANSVAAL:	P.O. Box 1338, Johannesburg. 2000.

the Secretary for Industries. The Committee held its first meeting in April, 1975.

COMMISSIONS OF ENQUIRY

The Federation made representations to the Commission of Enquiry into the Regulation of Monopolistic Conditions Act and to the Commission of Enquiry into Housing Matters. The Federation's nomination of a member to serve on the former Commission was accepted.

DEPARTMENTAL ENQUIRIES

Federation interests during the year gave their attention to Board of Trade Enquiries into the local manufacture of motor vehicles and components and into the manufactures of heavy production equipment, and also into Department of Customs and Excise enquiries into drawback and rebate procedures, and into customs valuations. SEIFSA was represented on the Committee which enquired into drawback and rebate procedures.

1976 SOUTH AFRICAN INDUSTRIAL EXHIBITION

SEIFSA is represented on the Management Committee of the Exhibition which will be held in Johannesburg in February 1976.

STANDARD CONDITIONS OF SALE AND TENDER FOR MACHINERY AND EQUIPMENT — EXPORT F.O.B.

The Federation prepared a set of conditions of sale and tender for use by exporters which the SEIFSA Economic Affairs Committee accepted as a 'Standard' document of guidance for exporting members.

FUNDS ADMINISTRATION DIVISION

The Federation is responsible for the administration and management of the following Funds which derive from the operation of Industrial Agreements in the metal and engineering industries group:—

METAL INDUSTRIES GROUP LIFE AND PROVIDENT FUND

The above Fund was converted to a contributory pension fund on 2nd June, 1975.

Contributions are at the rate of 5% of the pensionable remuneration of employees payable by both employees and employers.

Contributions to the Fund were previously derived from two Schemes; 'A' and 'B'. Scheme 'A' provided for contributions by employers and Scheme 'B' contributions by employees.

Benefits totalling R12 128 123 have been paid out since the inception of the Fund in 1957.

The Fund has assets totalling R87 068 603.

METAL INDUSTRIES MEDICAL AID FUND

This Fund was introduced on 30th August, 1965 to provide for the payment of medical aid benefits in respect of employees in the metal and engineering industries group who are members of the trade unions parties to the Industrial Agreement and in the employ of employers who are members of the Employer Associations within the Federation and parties to the Agreement. Benefits are payable by the Fund in respect of the employees and their dependants.

The number of employees covered by this Fund totals 43 800 and the total assets of the Fund at date are R3 742 801.

METAL INDUSTRIES GROUP PENSION FUND

The above Fund came into operation on 7th February, 1966 to provide for pension and death benefits for employees not covered under the Metal Industries Group Life and Provident Fund. The beneficiaries are largely non-European, and the Fund covers some 225 364 employees. At date, its total assets are R68 766 463.

SICK PAY FUND FOR THE IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY

This Fund provides sick pay for employees who are members of the trade unions parties to the Industrial Agreement in the employ of employers who are members of the Employer Associations within the Federation and parties to the Agreement. A funeral benefit is also paid by the Fund.

The Fund came into operation in 1955 and since that date has paid benefits totalling R9 576 555.

The Fund has a membership of 57 568 and the assets of the Fund total R5 593 819 at date.

ENGINEERING AND ALLIED INDUSTRIES EMPLOYEES' MEDICAL AID FUND

The above Fund was established on the 17th February, 1975 to provide medical aid benefits for employees but not their dependants at this stage, who are not covered by the Metal Industries Medical Aid Fund and who are members of the trade unions parties to the Industrial Agreement in the employ of employers who are members of the Employer Associations within the Federation and parties to the Industrial Agreement.

The number of employees covered by this Fund totals 1 980 and the total assets of the Fund at date amount to R12 428.

Report of the Council 1974/1975

MEETINGS

The Federation, resultant on continued expansion and consequential increase in work load within the metal and engineering industries group had an active year.

Apart from conferences and joint meetings with other organisations, five hundred and fifty-one meetings of the various interests within the Federation have taken place under its aegis.

The Divisions of the Federation concerned with Administration; Labour; the Bantu Labour Unit; Technical; Education and Training; Economics and Funds Administration have been active as have all the area Divisions and Associations.

The SEIFSA Council met on five occasions, with the SEIFSA Board of Management holding twelve meetings.

Additionally, employer representatives and members of the permanent staff regularly attended meetings of the National Industrial Council and its Committees both on the National and Regional levels apart from the negotiations relating to the Main Agreement, Technical Schedules and certain House and Domestic Agreements.

RE-ORGANISATION OF SEIFSA COUNCIL

The SEIFSA Council as presently constituted remains the plenary body of the Federation. SEIFSA Associations with common group labour interests are, however, primarily grouped in the following Divisions:—

Automotive Parts Manufacturing Division
Electrical, Electronics, Telecommunication and Allied Industries Division
Engineering Industries Division
Foundry Division
Iron and Steel and Ferro Alloys Division
Manufacturing Industries Division
Plastics Industries Division

The appropriate Division is consulted in the initial negotiating phases for Industrial Agreements including House Agreements to ensure co-ordination and to facilitate the formulation of policies respecting Association group labour interests. The autonomy of the individual Associations in relation to determining their individual policies is not abrogated.

The Chairmen of the respective Divisions have been co-opted to the SEIFSA Board of Management and Council to ensure co-ordination of policies.

ORGANISATION

The Federation comprises 58 Associations. During the year the following two new Associations were formed:—

Gas Cleaning Equipment Suppliers' Association of South Africa
S.A. Valve Manufacturers' Association

The work of the organisation falls broadly under the following Divisions:—

1. **Administrative Division**
   SEIFSA Parliamentary Committee
   Public Relations
   Secretarial Services to Associations
   Finance and Accounts
   Publications
   Technical Library
   SEIFSA Technological Fund Administration
   Metal and Engineering Industries Education and Training Fund Administration.
2. **Labour Division**
   Industrial Legislation, General Labour Relations, Liaison and Administration
   Central Negotiating Committee
   Sectional Negotiating Committees
3. **Bantu Labour Unit**
   Industrial Legislation, Black Labour Relations, Training, Liaison and Communications
   Non-European Affairs Central Committee having the following sub-Committees:
   (i) Non-European Labour Relations
   (ii) Non-European Wages and Productivity
   (iii) Non-European House Rentals, Transport, Bantu Services Levy and Bantu Affairs Administration Boards
   (iv) Committee on Decentralisation
4. **Technical Division**
   (i) Structuring of Industrial Agreement Technical Wage Schedules
   (ii) Pollution
   (iii) Industrial Effluents
   (iv) Standards
   (v) Metrication

5. **Education and Training Division**
   (i) Metal and Engineering Industries Education and Training Board
   (ii) Technical Training Committee including:
      (a) Apprentice sub-Committees
      (b) Metallurgical Process Operator Training sub-Committee

6. **Economics Division**
   Economic Affairs Committee with the following sub-Committees:
   (i) Customs Tariff
   (ii) Taxation
   (iii) Transportation
   (iv) Statistics
   (v) Exports
   (vi) Contract Price Adjustments

7. **Funds Administration Division**
   Metal Industries Group Life and Provident Fund
   Metal Industries Medical Aid Fund
   Metal Industries Group Pension Fund
   Sick Pay Fund for the Iron, Steel, Engineering and Metallurgical Industry
   Engineering and Allied Industries Employees' Medical Aid Fund.

ADMINISTRATIVE DIVISION

PUBLICATIONS

When necessary, the membership of Associations has been circularised on matters of special importance.

The Monthly Bulletin continues to be a regular feature of the Federation's activity. The Twenty First Edition of the "South African Metal Industries Directory and Handbook" was published during the year under review.

PUBLIC RELATIONS

Annual Dinner

The Thirty First Banquet took place at the Carlton Hotel, Johannesburg on the 17th October, 1974, Senator the Honourable O. P. F. Horwood, Minister of Economic Affairs, being the guest speaker.

LEGISLATION

The following measures were considered and representations made thereon where necessary:-

The Road Transportation Bill
The Bantu Laws Amendment Bill
The Workmen's Compensation Act
The Water Amendment Bill
The Trade Practices Bill
The Medical Schemes Amendment Bill
The Physical Planning and Utilization of Resources Amendment Bill
The Statistics Amendment Consolidation Act
The Trade Metrology Bill
The Financial Institutions Amendment Bill
The Bantu Employees In-Service Training Bill
The General Laws Amendment Bill

The Federation also examined other legislation of a general character having an industrial impact.

PARLIAMENTARY REPRESENTATION

The arrangement whereby Parliamentary representation is handled through our Cape Division by means of a Parliamentary Committee established in Cape Town continues to function satisfactorily.

IMPORT CONTROL

Satisfactory liaison has been maintained between the Federation and the Controller of Imports on various matters affecting the metal and engineering industries.

NON-FERROUS AND FERROUS CONTROL

Liaison is maintained with the Department of Industries on the operation of the aforegoing measure.

SEIFSA LIAISON OFFICER

The Liaison Officer on the SEIFSA staff continues to afford valuable contact between the Federation and firms, members of its constituent Associations.

NATIONAL DEVELOPMENT AND MANAGEMENT FOUNDATION OF SOUTH AFRICA

SEIFSA continues to be a member of the above Foundation.

INTERNATIONAL ASSOCIATION ON WATER POLLUTION RESEARCH

SEIFSA is represented on the South African National Committee set up to deal with the above.

SOUTH AFRICA BRITAIN TRADE ASSOCIATION LIMITED

SEIFSA continues to be represented on the Council of the above organisation.

DESIGN INSTITUT

SEIFSA is represented on the Advisory Committee of the Design Institute.

LIAISON WITH GOVERNMENT DEPARTMENTS

The Federation maintains effective liaison with the various Government Departments and their agencies concerning matters wherein mutual interest is involved.

LABOUR DIVISION

NATIONAL INDUSTRIAL COUNCIL

The Annual General Meeting of the National Industrial Council has been deferred until December, 1975. This has been occasioned by proposals to re-structure the Council in order to cater fully for the Employer Organisations and Trade Unions party thereto. A revised Constitution is presently under consideration by the parties.

The following National Group Committees operate within the Council:—

Automotive Parts Manufacturing Group
Electrical, Electronics, Telecommunication and Allied Industries Group
Engineering Industries Group
Foundry Industries Group
Iron and Steel Group
Miscellaneous Manufacturing Industries Group
Plastics Industries Group

These Group Committees are constituted for the purpose of determining technical issues arising from the operation of the various Agreements.

Meetings of certain of the Group Committees were held during the past year.

The Executive Committee of the Council has met regularly as have the Regional Councils in the following areas:—

Border	Natal
Cape	O.F.S. and Northern Cape
Midlands	Transvaal

INDUSTRIAL AGREEMENTS —

THE MAIN AGREEMENT

Amendments to the Main Agreement for the Industry were negotiated and became effective from 2nd June, 1975. The amendments arose from the employer undertaking given in the April/May, 1974 negotiations that should the consumer price index for all items from June, 1974 increase by 10% the employer parties would examine the situation to determine whether a measure of relief should be afforded workers.

During the aforementioned negotiations, Black representatives of the Black workers in industry participated in terms of the Bantu Labour Relations Regulation Act, 1973, together with officials of the Central Bantu Labour Board.

A further amendment to the Main Agreement prescribed an additional paid public holiday, Thursday, 14th August, 1975, to mark the centenary of the Afrikaans language.

THE SUPPLEMENTARY AGREEMENT

This Agreement, providing for the employment of Black employees on Rates C and D work in the Main Agreement and ISPA sub-Group Agreement continues to be utilised by employers to relieve the shortage of trade union eligible labour, and to provide job opportunities for Black workers. The Agreement runs concurrently with the Main Agreement and will expire on 30th June, 1976.

OTHER INDUSTRIAL AGREEMENTS

Agreements and/or specific Conditions of Employment relating to the following undertakings are current:—

Alusaf (Pty) Ltd.
AMCOR
Feralloys Ltd.
Ferro Alloy Producers' Association on behalf of specified companies
Highveld Steel & Vanadium Corporation Ltd.
Huletts Aluminium of South Africa Ltd.
ISCOR
ISPA sub-Group
Lift Engineering Industry (Servicing and Installation)
Radio Manufacturing Industry
Radio Refrigeration and Domestic Electrical Appliances Servicing Establishments (Transvaal)
Transalloys (Pty) Ltd.
Union Steel Corporation (of South Africa) Ltd. group of companies.

The Agreements have been amended to conform with the changes to the Main Agreement's conditions of employment.

Certain of the Agreements are currently under review or have been amended to cater for changes in the establishments or manufacturing processes.

THE JOURNEYMAN RECOGNITION AGREEMENT

This Agreement has been amended and will be republished. The Agreement will apply to all establishments and employees (Party and Non-Party) and will provide for prescribed training of participants in the scheme.

Since the inception of the scheme in 1965 more than 6 763 Journeyman Recognition contracts and certificates have been issued. The scheme continues to provide a valuable contribution in alleviating the shortage of skilled artisans.

METAL INDUSTRIES GROUP LIFE AND PROVIDENT FUND AGREEMENT

The Group Life and Provident Fund has been converted to a contributory pension fund with contributions at a rate of 5% payable by employees and a like amount by employers. The pension fund came into operation on 2nd June, 1975 and will provide pension benefits for members when reaching retirement age of 65 years with increased death benefit provisions and widows' benefit payments.

METAL INDUSTRIES GROUP PENSION FUND AGREEMENT

Improvements to the death benefit provisions of the Fund became operative on 2nd June, 1975. Consideration is to be given, depending on actuarial advice of the possibility of converting the basis for retirement pensions, so as to relate pensions to members' actual earnings as opposed to the present method based on wage group classifications.

METAL INDUSTRIES MEDICAL AID FUND AGREEMENT

Amendments to the Fund became effective on 10th March, 1975 providing, inter alia, for the inclusion of dental benefits with a minor increase in employee and employer contributions to the Fund. The Agreement has been extended for a further five year period ending 28th April, 1980.

ENGINEERING AND ALLIED INDUSTRIES EMPLOYEES' MEDICAL AID FUND AGREEMENT

The Agreement providing for Medical Aid benefits for lower paid workers, members of trade unions, became operative on 17th February, 1975. Benefits from the Fund apply in respect of the member only and not dependants.

SICK PAY FUND AGREEMENT FOR THE IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY

With effect from 10th March, 1975, sick pay benefits from the Fund were increased with a marginal increase in contributions. The Agreement has been extended for a further five year period ending 28th April, 1980.

SEIFSA TECHNOLOGICAL FUND AGREEMENT
METAL INDUSTRIES EDUCATION AND TRAINING FUND AGREEMENT

These Agreements are still current. Revision of the Education and Training Fund Agreement to cater for new designated trades is being effected.

SOUTH AFRICAN EMPLOYERS' CONSULTATIVE COMMITTEE ON LABOUR AFFAIRS

SEIFSA is a member of the above committee, the operations of which have been converted to include National as well as International labour affairs. The committee is presently considering the adequacy and efficacy of the provisions of the Bantu Labour Relations Regulation Act in providing machinery for dialogue between Black workers and employers and also matters relating to the taxation incidence on Black workers.

INSTITUTE OF LABOUR RELATIONS — UNISA

At the instigation of SEIFSA and with collaboration from other employer organisations an Institute for Labour Relations has been set up at the University of South Africa to involve where feasible the existing facilities and disciplines of the University.

NATIONAL INDUSTRIAL COUNCIL — STUDY AND ACTION COMMITTEE

Committee has been appointed to examine the ard labour requirements of the Metal and Engineering Industries. The Committee is presently paying particular attention to the training and retraining of workers in the Constructional and Heavy Engineering sectors.

MOTOR AND ENGINEERING INDUSTRIAL COUNCILS

The National Demarcation Liaison Committee which operates to determine demarcation issues arising between the two industries has continued to function although fundamental differences of interpretation of demarcation parameters are evident.

FURNITURE AND ENGINEERING INDUSTRIAL COUNCILS

The joint Demarcation Liaison Committee of the respective Councils in the Transvaal is still extant although no meetings of the Committee were necessary during the past year.

MANPOWER BOARD

SEIFSA is represented on the Board which is constituted under the Defence Act.

NATIONAL OCCUPATIONAL SAFETY ASSOCIATION

SEIFSA collaborates closely with the Association and is represented on the Board of Directors and on Regional Committees.

UNEMPLOYMENT INSURANCE BOARD

SEIFSA is represented on the Board.

COMMITTEE ON BETTER UTILISATION OF MANPOWER

SEIFSA continues to be represented on the Committee which is a sub-Committee of the Prime Minister's Economic Advisory Council which meets regularly.

CHAMBER OF MINES AND ENGINEERING INDUSTRY

Liaison between the Chamber of Mines and SEIFSA continues and close co-operation is maintained on labour matters.

SEIFSA — ORGANISATIONAL STRUCTURE

The Functional Divisions of SEIFSA which were established to improve communication between the individual Associations and the SEIFSA Board of Management and Council met to consider the proposals for amendment of the Main Agreement.

The Divisions concerned are:

1. Automotive Parts Manufacturing Division
2. Electrical, Electronics, Telecommunication and Allied Industries Division
3. Engineering Industries Division
4. Foundry Industry Division
5. Iron and Steel and Ferro Alloys Division
6. Manufacturing Industries Division
7. Plastics Industries Division

Chairmen of the functional Divisions have been co-opted to the SEIFSA Board of Management and Council to ensure co-ordination of the liaison procedures.

LIAISON OF EMPLOYER BODIES ON LABOUR MATTERS

Major employers of labour, namely SEIFSA, the Chamber of Mines, ISCOR, the South African Railways and Harbours and the Department of Posts and Telegraphs met the Minister of Labour in Cape Town to discuss labour matters of mutual interest.

FOREIGN CONTRACTORS — DEMAND FOR LABOUR

Submissions were made by SEIFSA to the Government on the disruptive effect on local industry as a result of the syphoning-off of labour by foreign contractors executing large projects in the Republic. SEIFSA's representations were considered by the Cabinet and assurance was received that foreign contractors would be required to ensure that a proportion of the required labour would be brought to the Republic for these various major contracts.

BANTU LABOUR UNIT

STAFF

During the year the staff of the Unit was augmented by the appointment of two Bantu Liaison Officers to specialise in the field of Black worker/management industrial relations and training and advisory services in connection therewith.

LIAISON COMMITTEES

The proper establishment and functioning of Liaison Committees has been promoted by SEIFSA through:—

(i) the publication of guidelines;
(ii) consultation with member Companies; and
(iii) Training of Black workers by the SEIFSA Bantu Liaison Officers.

MANAGEMENT TRAINING IN INDUSTRIAL RELATIONS

Management training programmes in the field of industrial relations, vis-a-vis Black workers, are currently being developed for SEIFSA's membership for more effective management/employee communication.

SEIFSA NON-EUROPEAN AFFAIRS CENTRAL COMMITTEE

The Committee continued to meet during the year and give attention to administration, legislation, training and industrial relations in respect of non-European Affairs and to advise the Board of Management, Council and Associations on matters relating thereto.

LEGISLATION

Consolidation of Levies Payable Under "Contributions in Respect of Bantu Labour Act, 1972 (Act No. 29 of 1972)"

Representations were made on the proposed increases in the levies payable in terms of the above Act.

Bantu Labour Relations Regulation Amendment Act, 1973 (Act No. 70 of 1973)

Recommendations for amendments to the above Act were made to the Minister of Labour by the South African Employers' Consultative Committee on Labour Affairs, of which SEIFSA is a member, with a view to establishing better communication links with Black workers at individual plant level and to secure effective Black worker participation in industrial negotiations with employers at regional and national level without fragmenting the existing Industrial Council system.

Direct representation of Blacks on the Central Bantu Labour Board was also recommended.

MIGRATORY LABOUR

The Federation submitted a memorandum on the migratory labour system relating to Black workers to the Government Departmental Committee of Enquiry.

BANTU AFFAIRS ADMINISTRATION BOARDS

SEIFSA continues to be represented on the various Boards in respect of the regional interests of the metal and engineering industries.

BANTU TAXATION

The Federation is represented on a Sub-Committee of the South African Employers' Consultative Committee on Labour Affairs which is concerned with formulating recommendations for the elimination of tax regressive inequities inherent in the present system.

BANTU TRAINING

1. **In-service Industrial Training of Bantu Persons in White Areas**

   SEIFSA continues to be represented on the Permanent Committee which is concerned with the establishment and control of the In-Service Training Centres throughout the country. It also has representation on the Governing Bodies of these centres.

2. **Private In-Company Training Schemes**

   The Bantu Labour Unit continues to advise member companies on the procedures necessary to obtain official registration of their in-company training schemes with a view to securing the optimum income tax concessions which have been made available.

METAL INDUSTRIES GROUP PENSION FUND

The opinions of certain Black employees were obtained regarding conversion of the present non-contributory fund to a contributory one and, as a result of the divergent viewpoints as well as the practical problems in the application of dependants' benefits and the equitable investment of the Fund's moneys in various Homelands, consideration of conversion was deferred.

HOME OWNERSHIP FOR BLACKS

SEIFSA continues to monitor the progress of the Government's proposals for home ownership for Blacks in the urban areas in view of the interest among certain member companies.

PRIVATE SECTOR HELP IN THE DEVELOPMENT OF THE BANTU HOMELANDS

SEIFSA has nominated individuals from within its membership to serve on the Economic Liaison Committees for the Kwazulu, Bophuthatswana, Transkei, Basothoqwaqwa and Ciskei Homelands.

CHAMBER OF MINES AND ENGINEERING INDUSTRY

Liaison between the Chamber of Mines and SEIFSA on labour matters continues, particularly in respect of industrial relations concerning Black workers.

TECHNICAL DIVISION

TECHNICAL SCHEDULES FOR INDUSTRIAL AGREEMENTS

Negotiations have continued with the trade unions on the re-structuring of technical schedules for incorporation in the Main Industrial Agreement and other Subsidiary Agreements.

Draft amendments to the Main Agreement including schedules for General Engineering and Manufacturing Engineering with general application to the industry, as also revised schedules for different divisions of the Main Agreement have been submitted to the Department of Labour for gazettal.

As other schedules are negotiated, authority for domestic application by members is arranged pending subsequent gazettal.

METRICATION

SEIFSA has been represented at meetings of the Metrication Advisory Board, the Industrial Metrication Group and the Steering Committee formed to consider the celebration of the Centenary of the Metre Convention in 1975.

Metrication matters affecting SEIFSA are constantly under review.

STANDARDIZATION

South African I.S.O. and I.E.C. Committees

SEIFSA representatives participate in the work of many of these Committees. Details of documents received and publications available are published regularly in the SEIFSA Monthly Bulletin.

South African Bureau of Standards

SEIFSA continued to give active support to the work of the Standards Industrial Liaison Committee during the past year and all activities of the Bureau of Standards have been reviewed at its regular meetings.

SEIFSA representatives participate in the work of the Technical Committee established to revise existing Standard Specifications and Codes of Practice and to prepare new ones.

The following table summarises current developments relating to Specifications and Codes of Practice relevant to the metal and engineering industries:—

50	New and revised Standard Specifications and Codes of Practice published.
28	Amendments issued.
36	Draft Specifications and Codes of Practice circulated for comment.
9	Questionnaires on need for new projects circulated.
28	New Technical Committees formed.

Details of these were published in the SEIFSA Monthly Bulletin.

DESIGN INSTITUTE — CONFERENCE "WHY DESIGN?"

This conference on industrial design, sponsored by SEIFSA and the Transvaal Chamber of Industries was opened by the SEIFSA President and attended by many SEIFSA members.

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

A number of Members attended an "open day" arranged by the Technical Services Department of the C.S.I.R. to explain the services available to industry in the areas of training and advise on low cost automation, numerically controlled machining and development of prototypes. This occasion is to be followed up by similar visits to be arranged on an Association basis.

NATIONAL PRODUCTIVITY INSTITUTE

SEIFSA continues to co-operate fully with the Institute and has given publicity to its services in the SEIFSA Monthly Bulletin.

POLLUTION

All aspects of the problem have continued to receive attention and in particular the following may be noted:—

Atmospheric Pollution

The SEIFSA interests mainly concerned have continued to maintain contact with the relevant authorities.

Agreement has been reached regarding control measures to be applied, for emissions from arc-furnaces and cold blast cupolas.

Water Pollution

A SEIFSA Committee has been formed to provide liaison with the Water Research Commission.

The Water Research Liaison Committee, on which SEIFSA is represented, has submitted an extensive report to the Commission in regard to proposals relating to the disposal of industrial wastes into sewers and the environment.

Noise Pollution

A SEIFSA Committee has been formed to provide liaison with the SABS Steering Committee on Acoustics which has finalized a report recommending national legislation to control noise pollution.

S.A. Committee for Conservation of the Environment

Liaison with this Government Committee has been secured through the appointment of an additional member with authority to report to different sectors of organised industry, including SEIFSA.

NATIONAL INSTITUTE FOR BUILDING RESEARCH C.S.I.R. STEERING COMMITTEE ON INDOOR ENVIRONMENT

SEIFSA is represented on the above Committee.

NATIONAL RESEARCH INSTITUTE FOR OCCUPATIONAL DISEASES OF THE SOUTH AFRICAN MEDICAL RESEARCH COUNCIL

SIEFSA is co-operating with the aforementioned institute relative to research into working space of employees in heavy industries.

LEGISLATIVE MATTERS

Attention is given to any technical aspects of legislation that may affect SEIFSA interests, including:—

Commission of Enquiry into Industrial Health

SEIFSA has submitted a memorandum to the Commission recommending inter alia, the establishment of a central Advisory Body to co-ordinate research on a national basis.

Commission of Enquiry into the Motor Industry

Through the Federation of Component Manufacturers' Associations, of which the SEIFSA Automotive Parts Production Engineers' Association is a Member, a preliminary memorandum has been submitted to the Commission, to be followed by provision of detailed information obtained from a survey of the motor component industry.

Hazardous Substances Act, 1973

Attention of Members has been drawn to the scheduling of a wide range of materials under the Act and draft regulations published for comment are being considered by SEIFSA interests primarily concerned.

Occupational Diseases in Mines and Works Amendment Act, 1975
Water Amendment Act (1975)

The attention of Members was drawn to the extended scope of the principal Acts affected by these measures.

EDUCATION AND TRAINING DIVISION

SEIFSA TECHNOLOGICAL FUND

The increasing demand on the Fund for the establishment and promotion of schemes of education and training within the metal and engineering industries continues and the awards for certain bursaries payable from this Fund were increased during the year under review.

TECHNICIAN TRAINING

467 bursaries were awarded to students taking the courses for the National Diploma for Technicians. The distribution of bursaries in the 15 approved courses at colleges for advanced technical education was as follows:—

Cape Town	50	Port Elizabeth	6
Durban	95	Vaal Triangle	54
Pretoria	50	Witwatersrand	210
Post Office College	2		

TRAINING OF ADMINISTRATIVE PERSONNEL

Seventy three bursaries were awarded to selected students who enrolled for the National Diploma in

Inkomstereserwes en onaangewende wins

Cost Accounting, National Diploma in Electronic Data Processing and Systems Analysis and the National Certificate in Supervisory Management. The distribution of bursaries at the colleges for advanced technical education was as follows:—

Natal	5	Pretoria	3
Vaal Triangle	3	Witwatersrand	62

UNIVERSITY FIRST DEGREE BURSARIES

Thirty four awards were made to students registered in approved courses at universities:—

Cape Town	3	Randse Afrikaanse	3
Durban	4	Stellenbosch	1
Port Elizabeth	3	Witwatersrand	14
Pretoria	6		

F. C. WILLIAMS/SEIFSA POST GRADUATE OVERSEAS RESEARCH SCHOLARSHIP

Under this scheme two re-awards were made for the 1974/75 academic year. One scholarship was for doctorate research in the field of digital electronics applied to telecommunications systems at the University of Cambridge. The second scholarship was for a master of business administration degree with an engineering bias at Cranfield Institute of Technology.

Two awards were made for the 1975/76 academic year, the one award was for doctorate research into the use of physical scale models for the solution of noise problems in the steel industry at the Institute of Sound and Vibration Research of Southampton University in England. The second scholarship was awarded for research into Labour Laws in Europe, certain African countries and South Africa.

WELDING TECHNOLOGY

During the year a course in Welding Technology was introduced at the Witwatersrand College for Advanced Technical Education. This facility would also be available to applicants at other colleges for advanced technical education as and when the course was extended to the particular colleges. Bursaries will be awarded for the courses.

The introduction of a National Diploma for Technicians in Welding Engineering from 1976 is being considered by the Department of National Education.

CHAIR OF LABOUR RELATIONS

The SEIFSA Technological Fund will subvent a Chair of Labour Relations at the University of South Africa.

INDUSTRIAL AUDIOMETRY

At the request of SEIFSA courses in Industrial Audiometry are now offered at certain colleges for advanced technical education.

The Department of Bantu Education has agreed to offer a similar course for Bantu.

ADVISORY COMMITTEES

SEIFSA is represented on Advisory Committees at the various colleges for advanced technical education.

REPRESENTATION ON THE COUNCILS OF COLLEGES FOR ADVANCED TECHNICAL EDUCATION, TECHNICAL COLLEGES AND TECHNICAL HIGH SCHOOLS

SEIFSA is also represented on the Councils of colleges for advanced technical education, technical colleges and technical high schools.

TRAINING OF APPRENTICES NATIONAL APPRENTICESHIP BOARD

SEIFSA continues to be represented on the Board which deals with matters of national policy relating to apprentices.

NATIONAL APPRENTICESHIP COMMITTEE FOR THE METAL INDUSTRY

SEIFSA is represented on the above Committee and Regional Committees thereof. During the year under review, the Committee examined the Conditions of Employment and Training of Apprentices.

RE-CONSTITUTION OF THE NATIONAL APPRENTICESHIP COMMITTEE FOR THE METAL INDUSTRY

The term of office of members of the Committee expired on 2nd August, 1975, and has been reconstituted by the parties.

APPRENTICESHIP STATISTICS

The number of apprenticeship registrations and current contracts for the years 1973/1974 relating to the National Apprenticeship Committee for the Metal Industry is as follows:—

Apprenticeship Registrations		Apprenticeship Current Contracts		Totals	
1973	1974	1973	1974	1973	1974
2960	3103	9928	10272	12888	13375

TRAINING COURSES — GENERAL

The Metallurgical Process Operators' Sub-Committee completed the syllabus of training for metallurgical process operators at N2 and N3 level and the compilation of lecture guides is being undertaken. The designation of new apprenticeships and trades for persons engaged in the installation of fire protection equipment, air conditioning systems and construction plant is being investigated by the Office.

The Department of National Education is investigating the apprenticeship tuition courses up to and including the level of the N3 and revising and adjusting these where necessary. SEIFSA is represented on the Working Sub-Committees established by the Department for this purpose.

APPRENTICESHIP ACHIEVEMENT PRIZE

An achievement prize of R250,00 will be awarded to each of the three apprentices employed in the metal and engineering industries obtaining the highest marks in the National Technical Certificate examinations at N1, N2 and N3 levels.

SOUTH AFRICAN INSTITUTE OF MATERIALS HANDLING

Courses leading to the National Certificate and Diploma in Materials Handling have been compiled and will be offered at colleges for advanced technical education in the main centres from January, 1976.

THE INDUSTRIAL SOCIETY, LONDON

SEIFSA is an overseas member of "The Industrial Society". The Society is an advisory and training body in management and industrial relations in Britain and is giving advice on certain training courses proposed for the Industries respecting management and supervisory training in the field of industrial relations.

RECRUITMENT FOR THE INDUSTRIES

Recruitment activities for and on behalf of the Industries continue to be conducted by the Office embracing: overseas recruitment; local placement of labour; mounting of career seminars; public relations; advertising campaigns and screening of films.

METAL AND ENGINEERING INDUSTRIES EDUCATION AND TRAINING FUND

Training grants continue to be paid by the Fund to employers. Grants totalling R3 741 560 were paid to employers in respect of employees qualifying during 1973/74.

ECONOMICS DIVISION

ECONOMIC ADVISORY COUNCIL AND SUB-COMMITTEES

SEIFSA is represented on the Prime Minister's Economic Advisory Council.

Onwards from the third quarter of 1974 the pressure of demand on manufacturing industry in South Africa eased concurrently with a decline of the economic growth rates of other industrial nations. The Council was therefore less occupied than in the previous year with material and fuel shortages, harbour congestion and similar impediments to productive activity. Attention in the Council was focused increasingly on monetary policy in the context of international trade, manpower training and re-training and, still more, on the inflation problem.

Following the Council's meeting in February, the Prime Minister issued a separate statement outlining the Council's policy proposals for combating inflation. These became the basis for discussions which ensued at official levels in an endeavour to hammer out practicable measures. The Council subsequently submitted a framework of proposed measures to the Cabinet and these with minor changes were announced as Government policy in June in the form of a 'Collective programme of action against inflation'.

The programme's implementation was entrusted to a Cabinet Committee assisted by an Advisory Committee, on which SEIFSA was represented. The Advisory Committee held its first meeting in August.

SEIFSA is represented also on the Ad Hoc sub-Committee on Immigration and on the Standing Advisory sub-Committee on Inflation which continues in being.

A new sub-Committee, on which SEIFSA is represented, was formed during the year to discuss road transportation problems with the Secretary for Transport and the General Manager, South African Railways.

A further sub-Committee of the Council is concerned with the 'better utilisation of manpower'.

SEIFSA ECONOMIC AFFAIRS COMMITTEE

Six meetings of the Committee were held in the course of the year to review business conditions in the metal and engineering industries and legislation affecting these sectors. A number of Commissions and official Committees of Enquiry were appointed or reported during the year of which those of specific interest to the Committee included urban transport, customs valuation, drawback and rebate procedures, monopolistic conditions, housing, the Road Transportation Bill and compulsory motor insurance.

On the occasions of the Prime Minister's Economic Advisory Council meetings the Federation's Memoranda and recommendations to the Council were formulated from information provided by the Committee members reporting for their respective manufacturing sectors.

SEIFSA EXPORT PROMOTION SUB-COMMITTEE

Consequent to the change of status of the Private Sector Export Advisory Committee, on which SEIFSA is represented, a working Committee, drawn from members of the SEIFSA Export Promotion sub-Committee, met to review the general scheme of export promotion incentives in current operation and to make on-going proposals to the SEIFSA Economic Affairs Committee.

EXPORT STATISTICS

Exports of metal and engineering products in 1974 totalled R450 million, a 35% increase on the previous year. Substantially increased exports included ferro alloys (R95 million) non-ferrous semis and manufactures, mechanical machinery including motor vehicle parts and transport equipment.

EXPORT NEWS

Trade enquiries from potential overseas buyers declined in number during the year. There was a marked increase in the number of approaches by foreign firms seeking collaboration with South African manufacturing interests under 'joint venture' schemes and technical consultancy arrangements.

ECONOMIC DEVELOPMENT PROGRAMME

Sectoral Advisory Committees met during the year to compare the performance of the metal and engineering sectors in 1974 with the earlier projections for that year in terms of the 1974/1979 Programme. In certain cases sectoral growth rates were recommended for revision. Officials of the Office of the Economic Advisor to the Prime Minister conducted these meetings.

STANDING ADVISORY COMMITTEE ON GATT

SEIFSA is represented on this Committee which is responsible for reviewing foreign trade matters in the light of national commitments under the GATT rules. The "Tokyo round" of GATT talks took place during the year in which South Africa participated.

SEIFSA ANNUAL SURVEYS

The Report on the SEIFSA Annual Survey of actual and projected capital expenditure by the metal and engineering industries was released in mid-year together with the SEIFSA Report and Statistics on 1974 Foundry Production in the Republic.

CUSTOMS TARIFF APPLICATIONS

Tariff applications affecting metal and engineering industry products which were referred to the Federation increased partly through a greater need than in the previous year of tariff protection against oversea offers of low-cost stocks accumulated as a result of recession.

Members of the SEIFSA Tariff Advisory Committee continued to contribute their specialist product knowledge for the purpose of tariff description details and similar technical problems.

PRIVATE SECTOR EXPORT ADVISORY COMMITTEE

The Committee in regular meetings throughout the year reviewed the full range of factors affecting South Africa's export trade. A number of important recommendations were submitted to the Interdepartmental Committee on Exports.

The arrangement whereby Government officials attend the Private Sector Committee meetings and the Chairman of the latter Committee attends the Interdepartmental Committee meetings promotes close liaison between the two sectors.

ANNUAL MEETING WITH THE RAILWAY MANAGEMENT

The meeting took place in November and was attended by representatives of Commerce, Industry, Agriculture and the Railway Management. The General Manager of South African Railways in his statement to the Conference enlarged on the Administration's plans in respect of Richards Bay Harbour, main line extensions and electrification, the extension of port facilities generally, airways and rolling stock. Policy matters of interest to railway users were raised by the private sector organisations attending.

NATIONAL CONSULTATIVE COMMITTEE ON POST OFFICE AFFAIRS

The Committee, on which SEIFSA is represented, met regularly during the year with Postal Officials and, on occasion, the Postmaster General taking part in the discussions.

IRON/STEEL EXPORT ADVISORY COMMITTEE

The Committe reviewed the operation of the Steel Export Promotion Schemes throughout the year. The Deputy Secretary for Industries is Chairman of the Committee and meetings are attended by the Scheme Administrators.

STATE TENDER BOARD

The State Tender Board met weekly during the year to assess and award tenders. SEIFSA is represented on the Board.

DECENTRALISATION BOARD

Contact has been maintained with the Board for the Decentralisation of Industry on details of policy and concessions.

TRANSPORT CONSULTATIVE COMMITTEE

The Committee's work during the year centred largely on the Road Transportation Bill, the Report of the Committee into Urban Transport Facilities and compulsory motor vehicle insurance. SEIFSA is represented on the Committee.

SEIFSA MONTHLY SURVEY OF BUSINESS CONDITIONS

The Federation surveys and reports business conditions in the metal and engineering industries on a monthly basis. Demand on the SEIFSA sectors weakened steadily from the third quarter of 1974 onwards. This is indicated by the percentage of firms reporting favourably on their order intake each month. From a peak of 81% in April 1974, the figure was 62% at the year-end and had fallen further to 40% by mid-1975. The decline subsequently has been less steep.

BUREAU OF MARKET RESEARCH OF THE UNIVERSITY OF SOUTH AFRICA

The Federation is a sponsor of the Bureau's studies of minimum and supplemented living level studies which cover Black, Coloured and Indian households in the main metropolitan and urban areas.

CONTRACT PRICE ADJUSTMENT

Demand for the Federation's booklet "SEIFSA Formula Principles" entailed the printing of a second followed by a third edition, during the year. The Federation also prepares each month a comprehensive statement of metal prices and indices relating to labour and material costs. This statement appears as an annexure in the SEIFSA Monthly Bulletin and is also mailed to a large number of non-member subscribers in Southern Africa and overseas.

DEPARTMENT OF STATISTICS

SEIFSA is represented on the Department's Technical Advisory Committees. During the year the Department asked the Federation to furnish it with data arising from SEIFSA quarterly surveys of wage rates paid. Subsequently the Department has published indices of actual wage rates paid and actual labour costs for three sectoral groupings of metal and engineering industries, with acknowledgement to SEIFSA as the data source.

The Federation is also responsible for compiling and reporting the tonnages of iron, steel and ferro alloy production in the Republic.

BUREAU OF FINANCIAL ANALYSIS OF THE UNIVERSITY OF PRETORIA

The Federation is represented on the Bureau's Advisory Council.

BUREAU OF ECONOMIC RESEARCH OF THE UNIVERSITY OF STELLENBOSCH

The Federation and the Bureau exchanged information on business condition survey methods. The Federation welcomed the formation during the year of the Bureau's new Unit for Futures Research.

S.A. RAILWAY AD HOC COMMITTEE ON THE IMMOBILISATION OF TRUCKS

SEIFSA is represented on the Committee which has met regularly to examine the causes of truck days lost to the railway system through truck immobilisation in private sidings.

NATIONAL CONSULTATIVE COMMITTEE ON HARBOURS

SEIFSA is represented on the Committee which was brought into being by the Railway Administration during the year.

MEETINGS WITH THE MINISTER OF ECONOMIC AFFAIRS

In accordance with the Minister's wish for close regular consultation with manufacturing industry, representatives of organised industry continue to meet the Minister together with senior officials of the Departments of Commerce and Industry.

INDUSTRIAL DEVELOPMENT CORPORATION

The Federation and the Corporation have continued to collaborate in regard to important national capital projects.

SPECIAL MEETINGS CONVENED BY THE SECRETARY FOR COMMERCE

The subject matter of special meetings convened in the year by the Secretary for Commerce has been Inflation.

Representatives of SEIFSA have attended these meetings.

STATISTICAL SERVICES

The Federation conducts regular surveys for ten SEIFSA industries at the request of their Associations. These result in statistical reports to the respondents and cover, inter alia, sales, production, import and export information.

The "Production Pages" published in the SEIFSA Monthly Bulletin set out the monthly production in the Republic of pig iron, crude steel, despatches of rolled and drawn steel products and castings. These statistics are also mailed each month to a large number of subscribing organisations and to the Press.

THE COMPANIES ACT

The Standing Advisory Committee on Company Law, on which SEIFSA is represented, advises the Minister on the Companies Act and amendments thereof and met during the year. Requests for comment on certain proposed amendments received from the Registrar of Companies were replied to by the Federation after consultation with the Federation's specialist advisors.

ACCOUNTING PRACTICES BOARD

SEIFSA is represented on the Accounting Practices Board.

PRODUCTIVITY ADVISORY COUNCIL

SEIFSA is represented on the Productivity Advisory Council.

STANDING ADVISORY COMMITTEE ON STATE COMPETITION

During the year, the Minister of Economic Affairs appointed this Committee, on which SEIFSA is represented, to review the Government's activities in regard to manufacturing under the Chairmanship of

Dunswart Iron & Steel Works Beperk

59ste Jaarverslag 1973

DUNSWART IRON & STEEL WORKS BEPERK

Ingelyf in die Republiek van Suid-Afrika

DIREKTEURE	Dr. F. A. Zoellner* (*Voorsitter*) Dr. W. F. O. Oelsen* (*Mede-besturende direkteur*) Dr. K. Schermer§ (*Mede-besturende direkteur*) C. L. Cartwright Dr. W. J. de Villiers Dr. W. B. Coetzer C. P. Linsell G. M. Paefgen* M. E. Rich‡ Dr. P. E. Rousseau B. M. Saager†
SEKRETARISSE	General Mining and Finance-korporasie Beperk
GEREGISTREERDE KANTOOR	General Mining-gebou, Hollardstraat 6, Johannesburg. 2001
FABRIEK	Dunswart, Witwatersrand, Transvaal
BANKIERS	Die Standard Bank van Suid-Afrika Beperk
OUDITEURE	Peat, Marwick, Mitchell & Co.
OORDRAGSEKRETARISSE	Consolidated Share Registrars Beperk, Marshallstraat 62, Johannesburg, 2001 (Posbus 61051, Marshalltown. 2107) Transvaal

*Duits §Oostenryks ‡Brits †Switsers

KENNISGEWING AAN AANDEELHOUERS

KENNIS GESKIED HIERMEE dat die nege-en-vyftigste algemene jaarvergadering van aandeelhouers van Dunswart Iron & Steel Works Beperk om 11.15 vm. op Donderdag, 25 April 1974 in die raadsaal, General Mining-gebou, Hollardstraat 6, Johannesburg gehou sal word vir die behandeling van die volgende sake:—

1. Om die balansstaat en rekeninge en die verslae van die direkteure en ouditeure vir die jaar geëindig 31 Desember 1973 te ontvang en te oorweeg.
2. Om direkteure te kies in plek van dié wat kragtens die statute van die maatskappy aftree.
3. Om die vergoeding van die ouditeure vir die afgelope oudit te bepaal.

Enige lid wat geregtig is om die vergadering by te woon en te stem mag 'n gevolmagtigde of gevolmagtigdes benoem om namens hom die vergadering by te woon, aan die besprekings deel te neem en te stem. Volmagvorms moet minstens 48 uur voor die aanvangstyd van die vergadering by die geregistreerde kantoor van die maatskappy ingedien word. 'n Gevolmagtigde hoef nie 'n lid van die maatskappy te wees nie.

Die oordrag- en lederegister van die gewone aandele sal vanaf 19 April tot en met 25 April 1974 gesluit word.

In opdrag van die Direksie,
GENERAL MINING AND FINANCE-KORPORASIE BEPERK
Sekretarisse
per: L. P. FOURIE

JOHANNESBURG
29 Maart 1974.

VOORSITTERSOORSIG

PRODUKSIE

Produksie van gesmelte staal van 272 299 metrieke ton in 1972 het in 1973 met 12,8 % tot 307 052 metrieke ton vermeerder en sou aansienlik hoër gewees het indien die lewering van grondstowwe deur die nuwe sponsysteraanleg aan verwagtings voldoen het. Produksie van knuppelstaal was as gevolg van die verhoogde vermoë van die vergrote deurloopgietaanleg teen 268 086 metrieke ton 14% hoër. Afgewerkte gewalste produkte teen 207 687 metrieke ton was slegs in 'n geringe mate hoër as in 1972.

FINANSIËLE RESULTATE

Dunswart Iron & Steel Works Beperk

Bruto wins was R4 337 797 vergeleke met R3 709 601 in 1972. Die huidige kapitale uitbreidingskema het tot gevolg gehad dat waardevermindering van R847 530 in 1972 tot R1 485 718 vir die oorsigjaar vermeerder het en rentebetalings van R293 278 tot R495 809. Netto wins voor belasting was R2 868 320 vergeleke met R2 514 937 die vorige jaar. Normale belasting teen R9 600 het weer eens voordeel getrek uit beleggings- en aanvangstoelaes, en nadat 'n voorsiening van R718 000 vir uitgestelde belasting en 'n geringe belastingaansuiwering ten opsigte van die vorige jaar gemaak is, het netto wins na belasting van R1 992 627 in 1972 met 7,9 % tot R2 150 286 vermeerder.

Groep

Gekonsolideerde netto wins na belasting toedeelbaar aan aandeelhouers van die maatskappy was R2 448 482 vergeleke met R2 175 416 vir die jaar geëindig 31 Desember 1972. Dit is gelyk aan 'n verdienste van 58,0 sent per aandeel teenoor 51,5 sent per aandeel in 1972. Voorkeurdividende van R12 000 en gewone diwidende van 19 sent per aandeel, wat in totaal R798 000 bedra het, is vir die jaar verklaar. Nadat 'n verdere bedrag van R50 000 na die obligasiedelgingsreserwe oorgedra is, 'n bedrag van R1 588 482 teen die jaareinde bygevoeg tot onaangewende wins in die gekonsolideerde rekeninge.

BALANSSTAAT

Dunswart Iron & Steel Works Beperk

Die huidige kapitale uitbreidingsprogram het 'n verdere verhoging van R14 374 654 tot R16 512 420 in die maatskappy se vaste bates tot gevolg gehad met 'n gepaardgaande verhoging in verbruiksvoorrade en onderdele wat vir die nuwe aanleg benodig word. Die vermindering, soos aangedui in die balansstaat, in bedrae verskuldig deur filiaalmaatskappye en in beleggings spruit voort uit die verkoop van die blok aandele in National Bolts Beperk wat deur u maatskappy en sy filiaal Dickor Holdings (Eiendoms) Beperk gehou is en wat in ooreenstemming met die beleid is wat verlede jaar in my oorsig gegee is. Uitgestelde uitgawes van R670 368 in die balansstaat verteenwoordig waardevermindering en 'n gedeelte van die bedryfs- en ontwikkelingskoste van die nuwe sponsysteraanleg gedert die afhandeling van die rekeninge is R650 000 van hierdie bedrag verhaal deur die skikking van versekeringseise met betrekking tot die sponsysteraanleg. Dit laat 'n saldo van R20 368 op die rekeninge vir uitgestelde uitgawes wat in die rekeninge vir die huidige jaar afgeskryf sal word.

Op 31 Desember 1973 het die saldo van wissels betaalbaar R1 894 266 bedra. Dit verteenwoordig uitstaande betalings vir die lewering en oprigting van die sponsysteraanleg. Nadat een wissel in Januarie 1974 betaal is, bedra uitstaande wissels DM 5 511 950, wat eers betaalbaar sal wees wanneer die aanleg finaal aanvaar word, wat op die vroegste in November van hierdie jaar sal wees, en dan sal die bedrag betaalbaar onderworpe wees aan aansuiwerings in die lig van die waardes wat Mnre. Krupp behaal ten opsigte van die nakoming van hul waarborge vir werkverrigting en produksie.

U maatskappy se likwiditeitstoestand, wat teen die jaareinde taamlik onder druk verkeer het, verbeter baie vinnig, en daar word vol vertroue verwag dat alle kortermynlenings teen die middel van die jaar ten volle terugbetaal sal wees.

GROEPBATES

Op 31 Desember 1973 was die gekonsolideerde netto groepbates toedeelbaar aan gewone aandeelhouers van die maatskappy R14 500 339, dit wil sê 345 sent per aandeel, teenoor R12 861 857 of 306 sent per aandeel in 1972.

UITVOERE

In 1973 het u maatskappy halfverwerkte en klaarvervaardigde produkte ter waarde van R3 426 000 uitgevoer. Die meeste uitvoere was na buurstate, Iran, die Midde-Ooste en die Verenigde Koninkryk.

Dit spyt my om te sê dat, as gevolg van die lae beskikbaarheid van die sponsysteraanleg en die voortspruitende tekort in die FE-toevoer vir die smeltery, produksie van rustaal en knuppelstaal in 1973 onder begroting was.

SPONSYSTERAANLEG

Gedurende die eerste twaalf maande is die beskikbaarheid van die aanleg deur ses onderbrekings geaffekteer, een keer deur 'n brand in die steenkoolvermalingsaanleg en ses keer deur onderbrekings van 'n meganiese aard. Hierdie onderbrekings het 'n aantal veranderings in die aanleg genoodsaak, en Mnre. Krupp is vol vertroue dat die aanleg nou sy beraamde vermoë sal bereik, in staat sal wees om deurlopend te werk en dat dit sal voldoen aan die voorgeskrewe werkverrigtingwaarborge met betrekking tot metallisasie, produksietonnemaat en syfers vir die verbruik van grondstof. Ander byvoegings tot u maatskappy se vaste bates het die volgende ingesluit: geriewe vir waterverkoeling en -behandeling in die staalsmeltaanleg by Lyttleton, bykomende items vir die deurloopgietaanleg, omvattende verbeterings aan die uitgietfasiliteite van die gietblok en smeltery, die installering van 'n transformator

met 'n hoër vermoë vir die Demag 1-oond en twee nuwe kompressors van 2 000 c.f.m. Veranderinge en uitbreidings is ook aan die laboratorium, takelwerk, inkel en kampong aangebring.

STAALPRYSE

Die beheerde staalprys is op 11 Mei 1973 verhoog, wat aan u maatskappy 'n gemiddelde verhoging van R9 per metrieke ton in die verkooppryse van sy klaarvervaardigde produkte besorg het. Die aangswekkende koers van koste-inflasie gedurende die afgelope jaar het egter weer eens die voordele van hierdie vermeerdering ten volle geabsorbeer en 'n verdere verhoging moes alreeds toegestaan gewees het om die Suid-Afrikaanse binnelandse staalpryse in 'n meer realistiese verhouding te bring met die heersende pryse op internasionale markte. Daar die gemiddelde binnelandse staalpryse in die gemeenskapmarklande, die Verenigde State en Japan 50 tot 60% hoër as die Suid-Afrikaanse binnelandse pryse is moet besef word dat, selfs al word toegegee dat dit noodsaaklik is dat die owerhede inflasie plaaslik aan bande moet lê, die Suid-Afrikaanse staalnywerheid nogtans oormatig benadeel word deur pryse wat geheel en al buite verhouding is met dié wat in ander nywerheidslande verkry word.

Kennis moet ook geneem word daarvan dat die toepassing van prysbeheer deur die regering op die staalnywerheid langer van duur en strenger is as vir alle ander vervaardigingsnywerhede wat aan prysbeheer onderworpe is. Hierdie diskriminerende element in die toepassing van regeringsbeheer sal verwyder moet word en die staalnywerheid sal regverdig behandel moet word.

Ek persoonlik is oortuig daarvan dat slegs die vrye mag van vraag en aanbod die grondslag van 'n gesonde nasionale ekonomie kan wees en dat regerings deur die manipulasie van pryse die grondslag kan lê vir die hewigste inflasie wat ooit ondervind is, gekenmerk deur onkeerbare prysdrukkings en tekorte. Ek dink dit is billik om te sê dat die begrip dat prysbeheer inflasie vererger, 'n steeds toenemende aanhang verkry.

FILIAALMAATSKAPPYE

The Standard Brass, Iron and Steel Foundries Beperk

U maatskappy se volfiliaal Elmwood Holdings (Eiendoms) Beperk hou 'n belang van 55,33% in The Standard Brass, Iron and Steel Foundries Beperk. Bruto wins van Standard Brass vir die jaar geëindig 31 Desember 1973 was R1 887 049 vergeleke met R1 850 805 in 1972. Na ontvangs van rente, wat hoër was, en waardevermindering, wat laer was, het netto wins voor belasting van R1 479 544 in 1972 tot R1 632 930 vir die oorsigjaar gestyg.

Netto wins na belasting was R976 767 teenoor R868 030 vir 1972, en 'n verhoogde diwidend van 15 sent per aandeel (1972 — 10 sent per aandeel) is verklaar. Teen die jaareinde was die verhouding van bedryfsbates tot bedryfslaste gelyk aan 2,35. Die produksievolume in 1973 was teen 'n hoë vlak en verkope was ongeveer 10% hoër as vir die vorige jaar. Die stand van bestellings van Standard Brass is goed gebalanseer en op 'n bevredigende vlak.

TOEKOMS VAN DIE WÊRELDSTAALBEDRYF

Gedurende die ekonomiese oplewing van 1973 het die wêreld nie alleen ontdek dat natuurlike hulpbronne opraak nie maar ook die vermoë om dit in basiese materiaal te omskep. In die Verenigde State, waar die staalnywerheid soos in ander wêreldlande teen volle vermoë gewerk het, is 109 miljoen ton produkte deur staalfabrieke gelewer teenoor 'n vermoë van 105 miljoen ton. Die verskil van 4 miljoen ton is opgemaak deur die gebruik van opgehoopte voorrade.

Sover dit vandag beraam kan word, staan die wêreldse staalnywerheid voor 'n lang tydperk van vinnig stygende vraag na sy produkte. 'n Onlangse ondersoek deur die Internasionale Yster- en Staalinstituut van die groeivooruitsigte van die mark dui die volgende aan:—

1970 omtrent 600 miljoen metrieke ton.
1980 omtrent 940 miljoen metrieke ton.
1985 omtrent 1 150 miljoen metrieke ton.

Indien die staalproduksie wil voldoen aan die „tendens"-aanvraag van 940 miljoen ton in 1980, sal dit noodsaaklik wees om vermoë vir daardie jaar tot nagenoeg 1 biljoen en 50 miljoen metrieke ton uit te brei ten einde die nodige speling te laat vir steurings in produksie en periodieke opwaartse fluktuasie in vraag.

Die netto verhoging in vermoë wat nodig is om tred te hou met die groei in aanvraag sal heelwaarskynlik van nou tot 1980 omtrent 325 miljoen metrieke ton beloop en 'n verdere 225 miljoen metrieke ton tussen die jare 1980 en 1985, wat 'n totaal van 550 miljoen metrieke ton gee. Die totale konstruksieprogram sal aansienlik hoër moet wees omdat die nywerheid ook sal moet voorsien in die vervanging van verouderde aanleggings. Ons nader nou vinnig 'n tydperk wanneer die aansienlike hoeveelheid fabrieke wat onmiddellik na die laaste oorlog gebou is die einde van hul doeltreffende lewe sal bereik. Vervangingbeleggings tussen nou en 1980 kan op 210 miljoen metrieke ton gestel word en vanaf 1980 tot 1985 op 150 miljoen metrieke ton. Die wêreldstaalnywerheid staan dus voor 'n bruto bouprogram van 535 miljoen metrieke ton vermoë tot aan die einde van 1980 en 375 miljoen ton van 1980 tot 1985. Dit sal tot 1985, onderworpe aan kostestygings, 'n totale belegging van $180 biljoen verg. Beramings in die Verenigde State dui daarop dat besluite om nuwe aanleggings te installeer slegs geregverdig is op die grondslag van 'n minimum prys per ton vir fabrieksprodukte van $250 (of R166).

Die gemiddelde binnelandse pryse van u maatskappy se fabrieksproduksie is R106 per ton. Die syfer van $250 (of R166) is verkry nadat voorsiening gemaak is vir beide self-finansiering en lenings. Met die voortdurende styging in die koste van aanleggings en waardeverminderings op historiese en onrealistiese boekwaardes sal daar 'n ern

beperking op self-finansiering wees; ewe-eens sal lenings bo 'n sekere vlak onhoudbare finansiële druk vir die betrokke maatskappye tot gevolg hê.

Die oorbrugging van die gaping in beleggingfinansiering kan slegs behaal word indien die winsgewendheid van staal aansienlik verhoog word. Al sou die uitwerking wat verdere inflasie op staalpryse mag hê buite rekening gelaat word, is dit onvermydelik dat staalpryse in Suid-Afrika sowel as wêreldwyd radikaal opwaarts aangepas sal moet word.

AFSLUITING

Dr. O. Oelsen, wat voorheen verbonde was aan die Thyssengroep in Duitsland, het in September 1973 as mede-besturende direkteur by u maatskappy aangesluit. Ek betuig my dank aan my kollegas in die direksie, aan die bestuur en aan al die werknemers van die maatskappy vir hulle voortgesette pogings en samewerking in 1973.

DR. F. A. ZOELLNER
Voorsitter

Johannesburg
27 Maart 1974

DIREKTEURSVERSLAG

U direkteure lê met genoeë hulle verslag tesame met die geouditeerde rekeninge vir die jaar geëindig 31 Desember 1973 aan u voor.

AANDELEKAPITAAL

Die gemagtigde en uitgereikte aandelekapitaal van die maatskappy het onverander soos volg gebly:

	Gemagtig	*Uitgereik*
	R	R
6% Kumulatiewe voorkeuraandele van R2 elk	250 000	200 000
Gewone aandele van 50 sent elk	4 000 000	2 100 000
	R4 250 000	R2 300 000

OBLIGASIEDELGINGSRESERWE

'n Bedrag van R50 000 is ten opsigte van die jaar geëindig 31 Desember 1973 na die obligasiedelgingsreserwe, wat geskep is om die delging van die R1 000 000 aan 7 persent eersteverbandobligasies te dek, oorgedra. Die obligasiereserwerekening bedra tans R675 000. Op 30 September 1973 is die derde aflossing van obligasies wat in tien gelyke paaiemente aflosbaar is, gemaak.

FINANSIËLE RESULTATE

Die finansiële resultate wat gedurende die oorsigjaar behaal is, kan soos volg opgesom word:

	Gekonsolideer	*Maatskappy*
	R	R
Wins voor belasting	4 264 000	2 868 000
Belasting	1 375 000	718 000
Wins na belasting	2 889 000	2 150 000
Min: Wins toedeelbaar aan buiteaandeelhouers	441 000	—
Wins toedeelbaar aan aandeelhouers van Dunswart Iron & Steel Works Beperk	2 448 000	2 150 000
Plus: Onaangewende wins oorgebring	7 894 000	7 546 000
Beskikbaar vir aanwending	R10 342 000	R9 696 000
Aangewend soos volg:		
Diwidende verklaar	810 000	810 000
Oorgedra na skuldbriefdelgingsreserwe	50 000	50 000
Onaangewende wins oorgedra	9 482 000	8 836 000

DIWIDENDE

Die volgende diwidende is ten opsigte van die jaar geëindig 31 Desember 1973 verklaar.

Op voorkeuraandele:		
Nr. 73 verklaar op 5 Junie 1973	R6 000	
Nr. 74 verklaar op 4 Desember 1973	6 000	
		R12 000
Op gewone aandele:		
Nr. 115 van 9 sent per aandeel verklaar op 5 Junie 1973	378 000	
Nr. 116 van 10 sent per aandeel verklaar op 4 Desember 1973	420 000	R798 000
		R810 000

FILIAALMAATSKAPPYE

The Standard Brass, Iron & Steel Foundries Beperk
Vir die jaar geëindig 31 Desember 1973 het netto wins na belasting R976 767 bedra vergeleke met R868 030 die vorige jaar.

'n Verhoogde diwidend van 15 sent per aandeel is ten opsigte van die oorsigjaar verklaar.

Elmwood Holdings (Eiendoms) Beperk
Hierdie maatskappy besit steeds 55,33 persent van die gewone aandele van The Standard Brass, Iron & Steel Foundries Beperk.

Dickor Holdings (Eiendoms) Beperk
Hierdie maatskappy besit 'n blok van 197 000 aandele in Howden Group South African Beperk.

Dunswart Properties (Eiendoms) Beperk
Hierdie maatskappy besit drie woonpersele in die munisipale gebied van Benoni, een woonperseel in die munisipale gebied van Johannesburg asook grond wat aan u maatskappy se fabriek grens, synde die restant van gedeeltes 264 en 668 van die plaas Kleinfontein nr. 67, wat 3,123 hektaar beslaan.

Mineral Exploration Company of South Africa (Eiendoms) Beperk
Hierdie maatskappy het op 'n klein skaal met mynbou-bedrywighede voortgegaan.

DIREKSIE

Gedurende die oorsigjaar is dr. W. F. O. Oelsen as medebesturende direkteur aangestel en sedert die jaareinde is dr. P. E. Rousseau as 'n direkteur van die maatskappy aangestel. Kragtens die statute van die maatskappy tree drs. W. B. Coetzer, W. F. O. Oelsen, P. E. Rousseau

K. Schermer en mnr. C. L. Cartwright op die komende algemene jaarvergadering uit, maar synde herkiesbaar, stel hulle hul vir verkiesing beskikbaar.

OUDITEURE

U sal gevra word om die ouditeure se vergoeding vir die afgelope oudit te bepaal.

ALGEMENE INLIGTING

Die belange van die maatskappy se direkteure in die aandelekapitaal en stembeheer van die maatskappy soos op die jaareinde was soos volg:

Naam	*Aantal aandele*	*Aard van belang*
C. L. Cartwright	735	begunstigde
Dr. W. B. Coetzer	400	nie-begunstigde
Dr. W. J. de Villiers	400	nie-begunstigde
C. P. Linsell	400	nie-begunstigde
Dr. W. F. O. Oelsen	400	nie-begunstigde
M. E. Rich	400	begunstigde
Dr. P. E. Rousseau	400	nie-begunstigde
B. M. Saager	630	begunstigde
G. M. Paefgen	400	nie-begunstigde
Dr. K. Schermer	420	begunstigde

Dr. F. A. Zoellner het die maatskappy in kennis gestel dat sy belange soos op 31 Desember 1973 soos volg was:

(a) Aandele gehou deur 'n gesinstrust — 75 000. Sedert die jaareinde is die trust se aandeelhouding tot 83 300 aandele verhoog.

(b) Aandele gehou deur 'n Switserse maatskappy wat deur dr. Zoellner beheer word — 10 000.

(c) Aandele gehou deur Sherwood Starr Gold Mining Company Beperk, 'n maatskappy waarin dr. Zoellner meer as 80% van die aandele besit — 2 200. Sedert die jaareinde het hierdie maatskappy sy aandeelhouding tot 10 000 verhoog.

(d) Dr. Zoellner hou ook 400 aandele as nie-begunstigde.

Sedert die jaareinde was daar geen veranderinge in die aandeelhouding van die ander direkteure nie.

Die maatskappy is nie bewus van die omvang van die ander direkteure se gesinsbelange, indien enige.

Daar bestaan dienskontrakte tussen die maatskappy en drs. W. F. O. Oelsen en K. Schermer met betrekking tot hul hoedanigheid as besturende direkteure van die maatskappy.

Namens die direksie
DR. F. A. ZOELLNER | *Direkteure*
DR. W. J. DE VILLIERS |

GENERAL MINING AND FINANCE-KORPORASIE BEPERK
Sekretarisse
per: L. P. FOURIE

Johannesburg
27 Maart 1974.

DUNSWART IRON & STEEL WORKS BEPERK

BALANSSTATE

[redacted]

OP 31 DESEMBER 1973

	Aantekeninge	GEKONSOLIDEER 1973 R	GEKONSOLIDEER 1972 R	MAATSKAPPY 1973 R	MAATSKAPPY 1972 R
FONDSE AANGEWEND					
AANDELEKAPITAAL EN RESERWES					
Aandelekapitaal	1	2 300 000	2 300 000	2 300 000	2 300 000
Aandelepremierekening	2	662 624	662 624	662 624	662 624
Kapitaalreserwe	3	1 395 830	1 395 830	1 395 830	1 395 830
Inkomstereserwes en onaangewende wins	4	10 341 885	8 703 403	9 695 579	8 355 293
		14 700 339	13 061 857	14 054 033	12 713 747
LENINGSKAPITAAL					
7% Eersteverbandobligasies 1971/80	5	600 000	700 000	600 000	700 000
LANGTERMYNLENING					
7% Onversekerde obligasies	6	3 125 652	3 125 977	3 125 652	3 125 977
BUITEAANDEELHOUERSBELANG		2 672 012	2 424 379	—	—
		21 098 003	19 312 213	17 779 685	16 539 724
AANWENDING VAN FONDSE					
VASTE BATES	7	20 874 453	18 574 562	16 512 420	14 374 654
BELANGE IN FILIAALMAATSKAPPYE	8	—	—	3 365 145	3 736 195
BELEGGINGS	9	77 668	674 667	368	55 027
ONVERSEKERDE LENINGS		167 000	127 000	—	—
LENINGSGEDEELTE VAN BELASTING — opgelope rente is uitgesluit.		276 760	313 371	156 093	197 154
		21 395 881	19 689 600	20 034 026	18 363 030
BEDRYFSBATES					
Voorrade		3 267 585	2 859 105	2 318 696	1 904 435
Debiteure en vooruitbetalings	12	4 236 028	3 478 460	2 677 489	2 210 483
Uitgestelde uitgawes	15	670 368	50 114	670 368	50 114
Korttermynlenings		11 125	11 125	11 125	11 125
Bankbalanse en kontant		635 673	532 346	11 326	144 098
Belasting vooruitbetaal		724 763	205 648	723 921	205 428
		9 545 542	7 136 798	6 412 925	4 525 683
Min:					
BEDRYFSLASTE					
Wissels betaalbaar		1 894 266	—	1 894 266	—
Krediteure en voorsienings	12	3 953 159	4 913 917	3 060 494	4 013 543
Lopende paaiement en rente op lenings-kapitaal	5	112 249	114 001	112 249	114 001
Diwidende		426 000	426 000	426 000	426 000
Belasting		223 688	203 021	—	—
Oortrokke bankrekening		1 853 257	1 192 445	1 853 257	1 192 445
		8 462 619	6 849 384	7 346 266	5 745 989
NETTO BEDRYFSBATES (-LASTE)		1 082 923	287 414	(933 341)	(1 220 306)
		22 478 804	19 977 014	19 100 685	17 142 724
Min:					
UITGESTELDE BELASTING		1 426 000	710 000	1 321 000	603 000
		21 052 804	19 267 014	17 779 685	16 539 724
KOSTE VAN BEHEER VAN FILIAAL-MAATSKAPPYE		45 199	45 199	—	—
		21 098 003	19 312 213	17 779 685	16 539 724

Die aangehegte aantekeninge vorm deel van die rekeninge.

per: C. F. O. RADEMAN — *Rekenmeester*

DR. F. A. ZOELLNER
DR. W. J. DE VILLIERS } *Direkteure*

Inkomstereserwes en onaangewende wins	4	10 341 883	8 765 465	9 893 249	
		14 700 339	13 061 857	14 054 033	12 713 747
LENINGSKAPITAAL					
7% Eersteverbandobligasies 1971/80	5	600 000	700 000	600 000	700 000
LANGTERMYNLENING					
7% Onversekerde obligasies	6	3 125 652	3 125 977	3 125 652	3 125 977
BUITEAANDEELHOUERSBELANG		2 672 012	2 424 379	—	—
		21 098 003	19 312 213	17 779 685	16 539 724
AANWENDING VAN FONDSE					
VASTE BATES	7	20 874 453	18 574 562	16 512 420	14 374 654
BELANGE IN FILIAALMAATSKAPPYE	8	—	—	3 365 145	3 736 195
BELEGGINGS	9	77 668	674 667	368	55 027
ONVERSEKERDE LENINGS		167 000	127 000	—	—
LENINGSGEDEELTE VAN BELASTING — opgelope rente is uitgesluit		276 760	313 371	156 093	197 154
		21 395 881	19 689 600	20 034 026	18 363 030
BEDRYFSBATES					
Voorrade		3 267 585	2 859 105	2 318 696	1 904 435
Debiteure en vooruitbetalings	12	4 236 028	3 478 460	2 [illegible] 489	2 210 483
Uitgestelde uitgawes	15	670 368	50 114	0 368	50 114
Korttermynlenings		11 125	11 125	11 125	11 125
Bankbalanse en kontant		635 673	532 346	11 326	144 098
Belasting vooruitbetaal		724 763	205 648	723 921	205 428
		9 545 542	7 136 798	6 412 925	4 525 683
Min:					
BEDRYFSLASTE					
Wissels betaalbaar		1 894 266	—	1 894 266	—
Krediteure en voorsienings	12	3 953 159	4 913 917	3 060 494	4 013 543
Lopende paaiement en rente op lenings-kapitaal	5	112 249	114 001	112 249	114 001
Diwidende		426 000	426 000	426 000	426 000
Belasting		223 688	203 021	—	—
Oortrokke bankrekening		1 853 257	1 192 445	1 853 257	1 192 445
		8 462 619	6 849 384	7 346 266	5 745 989
NETTO BEDRYFSBATES (-LASTE)		1 082 923	287 414	(933 341)	(1 220 306)
		22 478 804	19 977 014	19 100 685	17 142 724
Min:					
UITGESTELDE BELASTING		1 426 000	710 000	1 321 000	603 000
		21 052 804	19 267 014	17 779 685	16 539 724
KOSTE VAN BEHEER VAN FILIAAL-MAATSKAPPYE		45 199	45 199	—	
		21 098 003	19 312 213	17 779 685	16 539 724

Die aangehegte aantekeninge vorm deel van die rekeninge.

per: C. F. O. RADEMAN — *Rekenmeester*

DR. F. A. ZOELLNER
DR. W. J. DE VILLIERS | *Direkteure*

DUNSWART IRON & STEEL WORKS BEPERK

WINS-EN-VERLIESREKENINGE

VIR DIE JAAR GEËINDIG 31 DESEMBER 1973

	Aantekeninge	GEKONSOLIDEER 1973 R	GEKONSOLIDEER 1972 R	MAATSKAPPY 1973 R	MAATSKAPPY 1972 R
WINS VIR DIE JAAR VOORDAT DIE VOLGENDE ITEMS IN BEREKENING GEBRING IS		5 950 272	5 156 902	4 069 842	3 526 318
Plus:					
Rente ontvangbaar		40 584	48 977	15 616	23 672
Diwidende ontvangbaar:					
Handelsbeleggings		20	20	—	—
Ander		—	974	—	974
Filiaalmaatskappye		—	—	226 500	165 560
Wins met verkoop van vaste bates		21 968	—	17 181	—
Wins met verkoop van beleggings (1972-Verlies)		4 239	(8 654)	8 658	(6 923)
		6 017 083	5 198 219	4 337 797	3 709 601
Min:					
Rente betaal:					
Obligasies en langtermynlening		318 732	240 710	318 732	240 710
Ander		155 305	59 494	177 077	52 568
Waardevermindering van vaste bates	7 (b)	1 791 313	1 228 767	1 485 718	847 530
(*Min*) Oordrag na uitgestelde uitgawes	15	(512 050)	—	(512 050)	—
Verlies met verkoop van vaste bates		—	55 660	—	53 856
		1 753 300	1 584 631	1 469 477	1 194 664
WINS VOOR BELASTING		4 263 783	3 613 588	2 868 320	2 514 937
BELASTING	10				
Suid-Afrikaanse normale belasting op huidige winste		670 390	726 523	9 600	184 480
Plus (*Min*):					
Aansuiwerings ten opsigte van vorige jare		(11 933)	(18 464)	(9 566)	(11 170)
Uitgestelde belasting		716 000	338 000	718 000	349 000
		1 374 457	1 046 059	718 034	522 310
WINS NA BELASTING		2 889 326	2 567 529	2 150 286	1 992 627
Min:					
Wins toedeelbaar aan buiteaandeelhouers		440 844	392 113	—	—
WINS TOEDEELBAAR AAN AANDEELHOUERS VAN DUNSWART IRON & STEEL WORKS BEPERK		2 448 482	2 175 416	2 150 286	1 992 627
ONAANGEWENDE WINS OORGEBRING		7 894 278	6 680 742	7 546 168	6 405 541
(*Min*): Aansuiwerings	11	—	(143 220)	—	(34 000)
BALANS BESKIKBAAR VIR AANWENDING		10 342 760	8 712 938	9 696 454	8 364 168
Aangewend soos volg:					
Diwidende:					
Voorkeur nr. 73		6 000	6 000	6 000	6 000
Voorkeur nr. 74		6 000	6 000	6 000	6 000
Gewone nr. 115 van 18 persent		378 000	336 000	378 000	336 000
Finale gewone nr. 116 van 20 persent		420 000	420 000	420 000	420 000
Oorplasing na skuldbriefdelgingsreserwe		50 000	50 000	50 000	50 000
Voorlopige uitgawes afgeskryf		—	660	—	—
		860 000	818 660	860 000	818 000
ONAANGEWENDE WINS OORGEDRA	4	9 482 760	7 894 278	8 836 454	7 546 168

Die aangehegte aantekeninge vorm deel van die rekeninge.

Revenue reserves and unappropriated

Ander		—	974	—	974
Filiaalmaatskappye		—	—	226 500	165 560
Wins met verkoop van vaste bates		21 968	—	17 181	—
Wins met verkoop van beleggings (1972-Verlies)		4 239	(8 654)	8 658	(6 923)
		6 017 083	5 198 219	4 337 797	3 709 601
Min:					
Rente betaal:					
Obligasies en langtermynlening		318 732	240 710	318 732	240 710
Ander		155 305	59 494	177 077	52 568
Waardevermindering van vaste bates	7 (b)	1 791 313	1 228 767	1 485 718	847 530
(*Min*) Oordrag na uitgestelde uitgawes	15	(512 050)	—	(512 050)	—
Verlies met verkoop van vaste bates		—	55 660	—	53 856
		1 753 300	1 584 631	1 469 477	1 194 664
WINS VOOR BELASTING		4 263 783	3 613 588	2 868 320	2 514 937
BELASTING	10				
Suid-Afrikaanse normale belasting op huidige winste		670 390	726 523	9 600	184 480
Plus (*Min*):					
Aansuiwerings ten opsigte van vorige jare		(11 933)	(18 464)	(9 566)	(11 170)
Uitgestelde belasting		716 000	338 000	718 000	349 000
		1 374 457	1 046 059	718 034	522 310
WINS NA BELASTING		2 889 326	2 567 529	2 150 286	1 992 627
Min:					
Wins toedeelbaar aan buiteaandeelhouers		440 844	392 113	—	—
WINS TOEDEELBAAR AAN AANDEELHOUERS VAN DUNSWART IRON & STEEL WORKS BEPERK		2 448 482	2 175 416	2 150 286	1 992 627
ONAANGEWENDE WINS OORGEBRING		7 894 278	6 680 742	7 546 168	6 405 541
(*Min*): Aansuiwerings	11	—	(143 220)	—	(34 000)
BALANS BESKIKBAAR VIR AANWENDING		10 342 760	8 712 938	9 696 454	8 364 168
Aangewend soos volg:					
Diwidende:					
Voorkeur nr. 73		6 000	6 000	6 000	6 000
Voorkeur nr. 74		6 000	6 000	6 000	6 000
Gewone nr. 115 van 18 persent		378 000	336 000	378 000	336 000
Finale gewone nr. 116 van 20 persent		420 000	420 000	420 000	420 000
Oorplasing na skuldbriefdelgingsreserwe		50 000	50 000	50 000	50 000
Voorlopige uitgawes afgeskryf		—	660	—	—
		860 000	818 660	860 000	818 000
ONAANGEWENDE WINS OORGEDRA	4	9 482 760	7 894 278	8 836 454	7 546 168

Die aangehegte aantekeninge vorm deel van die rekeninge.

DUNSWART IRON & STEEL WORKS BEPERK

AANTEKENINGE BY DIE REKENINGE

OP 31 DESEMBER 1973

	1973		1972	
	Gemagtig	*Uitgereik*	*Gemagtig*	*Uitgereik*
1. AANDELEKAPITAAL (Volopbetaal)				
6% Kumulatiewe voorkeuraandele van R2 elk	250 000	200 000	250 000	200 000
Gewone aandele van 50 sent elk	4 000 000	2 100 000	4 000 000	2 100 000
	R4 250 000	R2 300 000	R4 250 000	R2 300 000

Die onuitgereikte aandele is onder beheer van die direkteure.

2. AANDELEPREMIEREKENING

Die saldo op hierdie rekening is onderworpe aan die bepalings van Artikel 86 quat van die Maatskappywet, 1926 (soos gewysig)

3. KAPITAALRESERWE

Oorskot voortspruitend uit die herwaardering in 1971 van die maatskappy se vrypaggrond en geboue.

	GEKONSOLIDEER		MAATSKAPPY	
	1973	1972	1973	1972
4. INKOMSTERESERWES EN ONAANGEWENDE WINS				
Skuldbriefdelgingsfonds	675 000	625 000	675 000	625 000
Algemene reserwe	184 125	184 125	184 125	184 125
Onaangewende wins	9 482 760	7 894 278	8 836 454	7 546 168
	R10 341 885	R8 703 403	R9 695 579	R8 355 293

5. LENINGSKAPITAAL

Die 7% eersteverbandobligasies word verseker deur 'n obligasieverbandakte oor sekere vaste eiendomme van die maatskappy en deur 'n bykomende algemene dekkingsverband oor ander bestaande en toekomstige bates. Aflossing geskied by wyse van jaarlikse paaiemente van R100 000 op 30 September.

6. LANGTERMYNLENING

Die 7% onversekerde obligasies is terugbetaalbaar teen pari op 1 Maart 1977. Die maatskappy het egter die reg om die totale bedrag op die volgende voorwaardes af te los.

(a) Op 1 Maart 1975 teen 101% van die hoofsom.
(b) Op 1 Maart 1976 teen 100,5% van die hoofsom.

7. VASTE BATES

(a) Vrypaggrond en geboue				
Teen waardasie	2 914 161	2 914 161	2 914 161	2 914 161
Teen kosprys	3 036 907	2 771 096	685 202	511 852
	5 951 068	5 685 257	3 599 363	3 426 013
Aanleg, voertuie, kantoormasjiene en meubels teen kosprys	27 242 656	22 709 737	22 355 977	18 131 574
Min: Waardevermindering	12 818 564	11 208 612	9 523 183	8 186 838
	14 424 092	11 501 125	12 832 794	9 944 736
Onvoltooide kapitaalwerk teen kosprys	344 329	1 233 216	56 358	980 000
Mineraalregte en prospekteeruitgawes,- teen kosprys	130 274	130 274	—	—
	20 849 763	18 549 872	16 488 515	14 350 749
Handelsbeleggings en voorskotte teen kosprys	24 690	24 690	23 905	23 905
	R20 874 453	R18 574 562	R16 512 420	R14 374 654
Verpligtinge ten opsigte van kapitaaluitgawes bedra ongeveer	R677 000	R2 474 000	R405 000	R2 300 000

(b) Geen voorsiening is gemaak vir waardevermindering of delging van vrypaggrond en geboue, mineraalregte en prospekteeruitgawes nie.

(c) Grond wat deur 'n filiaalmaatskappy aangekoop is onder 'n opskortverkoopooreenkoms word in die naam van laardie maatskappy oorgedra. Die grond en verbeteringe wat daarop aangebring is, is teen R794 391 (1972 — R7[illegible] 497) ingesluit.

2. AANDELEPREMIEREKENING

Die saldo op hierdie rekening is onderworpe aan die bepalings van Artikel 86 quat van die Maatskappywet, 1926 (soos gewysig)

3. KAPITAALRESERWE

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	14 424 092	11 501 125	12 832 794	9 944 736
Onvoltooide kapitaalwerk teen kosprys	344 329	1 233 216	56 358	980 000
Mineraalregte en prospekteeruitgawes,- teen kosprys	130 274	130 274	—	—
	20 849 763	18 549 872	16 488 515	14 350 749
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	R20 874 453	R18 574 562	R16 512 420	R14 374 654
Verpligtinge ten opsigte van kapitaaluitgawes bedra ongeveer	R677 000	R2 474 000	R405 000	R2 300 000

(b) Geen voorsiening is gemaak vir waardevermindering of delging van vrypaggrond en geboue, mineraalregte en prospekteeruitgawes nie.

(c) Grond wat deur 'n filiaalmaatskappy aangekoop is onder 'n opskortverkoopooreenkoms word in die naam van daardie maatskappy oorgedra. Die grond en verbeteringe wat daarop aangebring is, is teen R794 391 (1972 — R793 497) ingesluit.

	CONSOLIDATED 1973	CONSOLIDATED 1972	COMPANY 1973	COMPANY 1972
8. INTEREST IN SUBSIDIARY COMPANIES				
Shares at cost less amount written off R5 000			111 244	111 244
Amount owing by subsidiary companies, less provisions			3 253 901	3 624 951
			R3 365 145	R3 736 195
9. INVESTMENTS				
Quoted shares, at cost less amounts written off	R77 668	R674 667	R368	R55 027
(Market value)	(R75 220)	(R683 720)	(R360)	(R64 080)
10. TAXATION				
By reason of investment and building allowances claimed on capital expenditure, taxation for the year has been alleviated by	R404 560	R438 039	R375 133	R419 898
11. ADJUSTMENTS				
(a) A change in the basis of accounting for portion of the general overhead content of stocks resulted in a reduction of the unappropriated profit balance at December 31, 1971 by		57 228		34 000
(b) Losses of a subsidiary company to December 31, 1971 attributable to an original investment held prior to the acquisition of control by the holding company were		121 936		
Less: Previously provided in the accounts of the holding company		35 944		
		85 992		
	—	R143 220	—	R34 000
12. HOLDING AND FELLOW SUBSIDIARY COMPANIES				
The following are included in creditors and debtors respectively:—				
Amounts due to holding and fellow subsidiary companies	R257 462	R6 866	R257 045	R6 506
Amounts due by holding and fellow subsidiary companies	R34 911	R20 404	R7 614	R13 969

13. FOREIGN CURRENCIES

Liabilities in foreign currencies have been converted at approximately the rates ruling at December 31, 1973.

14. DIRECTORS EMOLUMENTS				
Fees — from the company and a subsidiary company			19 850	18 917
Managerial remuneration and other benefits — from the company and a subsidiary company			63 017	72 845
			R82 867	R91 762

15. DEFERRED EXPENDITURE

Deferred expenditure includes depreciation, operating and certain development costs of the sponge iron plant. The directors consider that at least this amount will be recovered from the proceeds of outstanding claims for loss of profits.

2 SHARE PREMIUM ACCOUNT

Dunswart Iron & Steel Works Limited

59th Annual Report 1973

DUNSWART IRON & STEEL WORKS LIMITED

Incorporated in the Republic of South Africa

DIRECTORS	Dr. F. A. Zoellner* (*Chairman*) Dr. W. F. O. Oelsen* (*Joint managing director*) Dr. K. Schermer§ (*Joint managing director*) C. L. Cartwright Dr. W. J. de Villiers Dr. W. B. Coetzer C. P. Linsell G. M. Paefgen* M. E. Rich‡ Dr. P. E. Rousseau B. M. Saager†
SECRETARIES	General Mining and Finance Corporation Limited
REGISTERED OFFICE	General Mining Building, 6 Hollard Street, Johannesburg. 2001
WORKS	Dunswart, Witwatersrand, Transvaal
BANKERS	The Standard Bank of South Africa Limited
AUDITORS	Peat, Marwick, Mitchell & Co.
TRANSFER SECRETARIES	Consolidated Share Registrars Limited, 62 Marshall Street, Johannesburg. 2001 (P.O. Box 61051, Marshalltown. 2107) Transvaal

**German* §*Austrian* ‡*British* †*Swiss*

NOTICE TO SHAREHOLDERS

NOTICE IS HEREBY GIVEN that the fifty-ninth annual general meeting of members of the company will be held in the board room, General Mining Building, 6 Hollard Street, Johannesburg on Thursday, April 25, 1974, at 11.15 a.m. for the following purposes:—

1. To receive and consider the balance sheet and accounts for the year ended December 31, 1973, and the reports of the directors and auditors.
2. To elect directors in place of those retiring in terms of the company's articles of association.
3. To determine the remuneration of the auditors for the past au[illegible].

A member entitled to attend and vote at the meeting may appoint a proxy or proxies to attend, speak and vote in his stead. A proxy need not be a member of the company. Proxy forms must be deposited at the registered office of the company at least 48 hours before the time of holding the meeting.

The transfer books and register of members of the ordinary shares will be closed from April 19 to April 25, 1974, both days inclusive.

By order of the Board,

GENERAL MINING AND FINANCE CORPORATION LIMITED

Secretaries

per: L. P. FOURIE

JOHANNESBURG

March 29, 1974.

CHAIRMAN'S STATEMENT

PRODUCTION:

Production of molten steel during 1973 increased by 12,8% to 307 052 metric tons from 272 299 metric tons in 1972 and would have been substantially higher if the raw material supply from the new Sponge Iron Plant had come up to expectations. Billet production as a result of the increased capacity of the enlarged Continuous Casting Plant, was 14,0 % higher at 268 086 metric tons. Finished rolled products totalled 207 687 metric tons, representing only a marginal increase over 1972.

FINANCIAL RESULTS:

Dunswart Iron & Steel Works, Limited

Gross Profit was R4 337 797 as compared with R3 709 601 in 1972. The present capital expansion scheme resulted in sharp rises in depreciation from R847 530 in 1972 to R1 485 718 in the year under review, and in interest paid from R293 278 to R495 809. Net profit before taxation was R2 868 320 as against R2 514 937 in the previous year. Normal taxation at R9 600 benefited again from investment and initial allowances and after provision of R718 000 for deferred taxation and a minor tax adjustment in respect of previous years, net profit after tax increased by 7,9% to R2 150 286 from R1 992 627 in 1972.

Group

Consolidated net profit after tax attributable to the shareholders of the Company was R2 448 482 as compared with R2 175 416 for the year ended 31st December, 1972. This represents earnings per ordinary share of 58,0 cents as against 51,5 cents per share in 1972. Preference dividends of R12 000 and Ordinary dividends totalling 19 cents per share absorbing R798 000 were declared for the year. After transfer of a further R50 000 to debenture redemption reserve, an amount of R1 588 482 was added to unappropriated profits in the consolidated accounts at the year end.

BALANCE SHEET:

Dunswart Iron & Steel Works, Limited

The present capital expansion scheme resulted in a further rise in the Company's fixed assets from R14 374 654 to R16 512 420 and a corresponding rise in stocks of consumable stores and spare parts necessary for the new plant. The reduction in amounts owing by subsidiary companies and in investments shown in the Balance Sheet was due to the sale of the block of National Bolts Limited shares held by your Company and its subsidiary Dickor Holdings (Pty) Limited in pursuance of the policy as given in my statement last year.

Deferred expenditure of R670 368 in the Balance Sheet represents depreciation and part of the operating and development costs of the new Sponge Iron Plant. Since the completion of the accounts R650 000 of this amount has been recouped out of the settlement of insurance claims in connection with the Sponge Iron Plant, leaving a balance of R20 368 on the deferred revenue expenditure account which will be written off in the accounts this year.

Bills payable at 31st December, 1973 are shown as R1 894 266. These represented outstanding payments for the supply and erection of the Sponge Iron Plant installation. After the payment of one bill in January 1974 the total bills outstanding are DM5 511 950 which will only fall due on final acceptance of the Plant, at the earliest in November this year, and the amounts payable will then be subject to adjustment in the light of the values achieved by Messrs. Krupp in fulfilling their performance and production guarantees for the Plant. Your Company's liquidity position which was rather strained at the year end is improving rapidly and it is confidently expected that all short term borrowings will be fully repaid by the middle of this year.

Group Assets:

Consolidated Group net assets at 31st December, 1973, attributable to ordinary shareholders of the Company totalled R14 500 339 equivalent to 345 cents per share as against R12 861 857 equivalent to 306 cents per share in 1972.

EXPORTS:

During 1973 your Company exported semis and finished products to a value of R3 426 000. The majority of exports went to neighbouring territories, Iran, the Middle East and the United Kingdom.

I regret to say that due to the low availability of the Sponge Iron Plant and the resulting shortfall in the Fe input for the meltshop, crude steel and billet production did not come up to the budgeted figures for 1973.

SPONGE IRON PLANT:

The availability of the Plant during the first twelve months has been affected by six stoppages caused by one fire in the coal milling plant and five breakdowns of a mechanical nature. These breakdowns have necessitated a number of modifications to the Plant. Messrs. Krupp are confident that the Plant will now reach its rated capacity, will be able to operate continuously, and will fulfil the prescribed performance guarantees as to metallisation, production tonnages and raw material consumption figures. Other additions to your Company's fixed assets during 1973 included water cooling and treatment facilities, a dolomite fluxing sand plant located at Lyttleton, ancillary items for the Continuous Casting Plant, extensive improvements to the ingot casting and meltshop ladle facilities, the installation of a higher capacity transformer for the Demag I Furnace and two new 2 000 c.f.m. compressors. Alterations and extensions were also made to the Laboratory, tackle shop and compound.

STEEL PRICE:

The controlled price of steel was increased on 11th May, 1973, giving your Company an average rise of R9 per metric ton in the selling price of its finished products. The frightening rate of cost inflation over the last year, however,

once again totally absorbed the benefits of this increase and a further increase is now overdue to bring South African domestic steel prices into a more realistic relationship with those ruling on international markets. As average domestic steel prices in the Common Market countries, the United States and Japan are 50—60% higher than the South African domestic prices, it must be appreciated that even granting the authorities the necessity of containing inflation locally, the South African Steel Industry is nevertheless being unduly penalised by price levels completely out of gear with those obtaining in other industrialised countries.

It should also be noted that the application of Government price control to the Steel Industry has been more prolonged and more severe than for all other manufacturing industries which are subject to price control. This discriminatory element in the application of Government control will have to be removed and the Steel Industry will have to be treated equitably.

Personally, I am convinced that only the free forces of supply and demand can be the basis of a sound national economy and that by manipulating prices governments will set the stage for the strongest inflation ever experienced, characterized by uncontainable price pressures and shortages. I think it is fair to say that the perception that price controls make inflation worse has an ever-increasing following.

SUBSIDIARY COMPANIES:

The Standard Brass, Iron & Steel Foundries Limited

A 55,33% interest in the Standard Brass, Iron & Steel Foundries Limited is held by your Company's wholly owned subsidiary Elmwood Holdings (Pty) Limited. Gross profit of Standard Brass for the year ended 31st December, 1973, was R1 887 049 as compared with R1 850 805 in 1972. After higher interest receipts and a reduced depreciation charge, net profit before tax rose from R1 479 544 in 1972 to R1 632 930 in the year under review. Net profit after tax was R976 767 as against R868 030 in 1972 and an increased dividend was declared of 15 cents per share (1972 — 10 cents per share). The ratio of current assets to current liabilities at the year end was 2,35. The volume of production in 1973 was at a high level and sales were approximately 19% higher than in the previous year. The Standard Brass Order Book remains well balanced and at a satisfactory level.

FUTURE OF WORLD STEEL INDUSTRY:

During the economic boom of 1973, the World discovered that it was not only running short of natural resources, but also of the capacity to turn them into basic materials. In the United States, where the Steel Industry, as in other parts of the World, worked at full capacity, 109 million tons of steel mill products were shipped, versus a capacity of 105 million tons, the difference being made up by drawing 4 million tons from leftover inventories.

As far as can be assessed today, the World Steel Industry faces a prospect of a long period of fast rising demand for its products. A recent study by the International Iron and Steel Institute of market growth presents the following picture:

1970 about 600 million metric tons,
1980 about 940 million metric tons,
1985 about 1 150 million metric tons.

If steel production is to match the "trend" demand of 940 million metric tons in 1980, capacity will need to expand to the region of 1 billion and 50 million metric tons per that year in order to provide the necessary margin for production upsets and periodic upward fluctuations of demand.

The net increase in capacity required to match the growth in demand will, in all likelihood, be to the order of 325 million metric tons between now and 1980, and another 225 million metric tons between 1980 and 1985, giving a total of 550 million metric tons. However, the total construction programmes will have to be appreciably larger since the industry will also have to provide for the replacement of ageing plant. We are rapidly approaching a period when the considerable amount of plant built immediately after the War will be coming to the end of its effective life. Replacement investment can be put at about 210 million metric tons between now and 1980 and at 150 million metric tons from 1980 to 1985. Therefore, the World Steel Industry is faced with a gross building programme of 535 million tons capacity up to the end of 1980 and 375 million tons from 1980 to 1985. This will, subject to cost escalation, require a total investment of $180 billion up to 1985.

United States estimates are that only on the basis of a minimum price of $250 = R166 per ton for mill products the decision to install new plant is warranted.

The average domestic price for your Company's mill products is R106 per ton. The figure of $250 = R166 is arrived at after making provision for both self-financing as well as borrowing. With the ever-rising cost of plant and depreciation on historical and unrealistic book values, there will be a severe restriction on self-financing; equally borrowing beyond a certain level will cause unsupportable financial burdens for the companies involved. The closing of the investment financing gap can, therefore, only be achieved if the profitability in steel is increased substantially. Even ignoring the impact further inflation might have on steel prices, it is unavoidable that steel prices will have to be radically adjusted upwards both in South Africa and Worldwide.

CONCLUSION:

In September, 1973, Dr. O. Oelsen who was formerly with the Thyssen Group, Germany, joined your Company as Joint Managing Director. I should like to express my thanks to my colleagues on the Board, to the Management and to all the employees of the Company for their continued efforts and co-operation during 1973.

DR. F. A. ZOELLNER
Chairman

Johannesburg
March 27, 1974

DIRECTORS' REPORT

Your directors have pleasure in submitting their report together with the audited accounts of the company for the year ended December 31, 1973.

SHARE CAPITAL

The authorised and issued share capital of the company remained unchanged and is as follows:

	Authorised	*Issued*
	R	R
6% Cumulative preference shares of R2 each	250 000	200 000
Ordinary shares of 50 cents each	4 000 000	2 100 000
	R4 250 000	R2 300 000

DEBENTURE REDEMPTION RESERVE

An amount of R50 000 in respect of the year ended December 31, 1973, was transferred to the debenture reserve account, which is to cover the redemption of the R1 000 000 7 per cent first mortgage debenture stock. The debenture reserve account now stands at R675 000. The third redemption of the stock which is redeemable in ten equal instalments was made on September 30, 1973.

FINANCIAL RESULTS

The financial results for the year, as reflected in the consolidated profit and loss account may be summarised as follows:

	Consolidated	*Company*
	R	R
Profit before taxation	4 264 000	2 868 000
Taxation	1 375 000	718 000
Profit after taxation	2 889 000	2 150 000
Deduct: Profit attributable to outside shareholders	441 000	—
Profit attributable to shareholders of Dunswart Iron & Steel Works Limited	2 448 000	2 150 000
Add: Unappropriated profit brought forward	7 894 000	7 546 000
Available for appropriation	R10 342 000	R9 696 000
Dealt with as follows:		
Dividends declared	810 000	810 000
Transfer to debenture redemption reserve	50 000	50 000
Unappropriated profits carried forward	9 482 000	8 836 000

DIVIDENDS

The following dividends were declared in respect of the year ended December 31, 1973:

On preference shares:		
No. 73 declared on June 5, 1973	R6 000	
No. 74 declared on December 4, 1973	6 000	
		R12 000
On ordinary shares:		
No. 115 of 9 cents per share declared on June 5, 1973	378 000	
No. 116 of 10 cents per share declared on December 4, 1973	420 000	R798 000
		R810 000

SUBSIDIARY COMPANIES

The Standard Brass, Iron & Steel Foundries Limited

Net profit after taxation for the year ended December 31, 1973 was R976 767 as compared with R868 030 for the previous year. An increased dividend of 15 cents per share was declared for the year under review.

Elmwood Holdings (Proprietary) Limited

This company continued to hold 55,33 per cent of the equity of The Standard Brass, Iron & Steel Foundries Limited.

Dickor Holdings (Proprietary) Limited

This company holds a block of 197 000 shares in Howden Group South Africa Limited.

Dunswart Properties (Proprietary) Limited

This company owns three residential properties in the Benoni municipal area, one residential property in the Johannesburg municipal area and certain land adjoining your company's works, being the remainder of portions 264 and 668 of the farm Kleinfontein No. 67, in extent 3,123 hectares.

Mineral Exploration Company of South Africa (Proprietary) Limited

This company continued mining operations on a limited scale.

DIRECTORATE

During the year under review Dr. W. F. O. Oelsen was appointed joint managing director and after the year end Dr. P. E. Rousseau was appointed a director of the company. In terms of the company's articles of association Drs. W. B. Coetzer, W. F. O. Oelsen, P. E. Rousseau,

K. Schermer and Mr. C. L. Cartwright retire at the forthcoming annual general meeting, and being eligible offer themselves for re-election.

AUDITORS

You will be asked to fix the auditors' remuneration for the past audit.

GENERAL INFORMATION

The interests of the directors in the share capital and voting control of the company as at December 31, 1973 were as follows:

Name	*Number of shares*	*Nature of interest*
C. L. Cartwright	735	beneficial
Dr. W. B. Coetzer	400	non-beneficial
Dr. W. J. de Villiers	400	non-beneficial
C. P. Linsell	400	non-beneficial
Dr. W. F. O. Oelsen	400	non-beneficial
M. E. Rich	400	beneficial
Dr. P. E. Rousseau	400	non-beneficial
B. M. Saager	630	beneficial
G. M. Paefgen	400	non-beneficial
Dr. K. Schermer	420	beneficial

Dr. F. A. Zoellner has advised the company that his interest in the shares of the company at December 31, 1973 was as follows:

(a) Shares held by a family trust — 75 000. Since the year end the trust's holding has been increased to 83 300 shares.

(b) Shares held by a Swiss company which is controlled by Dr. Zoellner — 10 000 shares.

(c) Shares held by Sherwood Starr Gold Mining Company Limited of which Dr. Zoellner holds over 80% of the equity — 2 200 shares. Since the year end this company's holding has been increased to 10 000 shares.

(d) Dr. Zoellner is also the non-beneficial holder of 400 shares.

There have been no changes in the other directors' shareholding since the end of the year. The company is not aware of the extent, if any, of the other directors' family interests.

There are existing service contracts between the company and Drs. W. F. O. Oelsen and K. Schermer relating to their position as managing directors of the company.

For and on behalf of the board

DR. F. A. ZOELLNER
DR. W. J. DE VILLIERS
Directors

GENERAL MINING AND FINANCE CORPORATION LIMITED
Secretaries
per: L. P. FOURIE

Johannesburg
March 27, 1974.

REPORT OF THE AUDITORS

We have examined the books and accounts and vouchers of the company to the extent we have considered necessary for the purpose of our audit and have obtained all the information and explanations which to the best of our knowledge and belief were necessary for that purpose. We have satisfied ourselves of the existence of the securities. In our opinion proper books of account have been kept by the company, so far as appears from our examination of those books.

The attached balance sheet and profit and loss account are in agreement with the books of account. In our opinion and to the best of our information and according to the explanations given to us the said accounts give the information required by the Companies Act, 1926 (as amended) in the manner so required and the balance sheet and profit and loss account give a true and fair view respectively of the state of the company's affairs as at December 31, 1973 and of the profit for the year ended on that date.

We have also examined the annexed consolidated balance sheet and consolidated profit and loss account of the company and its subsidiaries with the audited accounts of those companies. In our opinion, such consolidated balance sheet and consolidated profit and loss account have been properly prepared in accordance with the provisions of the Act so as to give a true and fair view of the state of affairs and profit of the company and its subsidiaries so far as concerns members of Dunswart Iron & Steel Works, Limited.

PEAT, MARWICK, MITCHELL & Co.
Chartered Accountants (*S.A.*)

Carlton Centre,
Johannesburg.
February 21, 1974.

DUNSWART IRON & STEEL WORKS LIMITED

BALANCE SHEETS

AT DECEMBER 31, 1973

	Notes	CONSOLIDATED 1973 R	CONSOLIDATED 1972 R	COMPANY 1973 R	COMPANY 1972 R
FUNDS EMPLOYED					
SHARE CAPITAL AND RESERVES					
Share capital	1	2 300 000	2 300 000	2 300 000	2 300 000
Share premium account	2	662 624	662 624	662 624	662 624
Capital reserve	3	1 395 830	1 395 8[illegible]	1 395 830	1 395 830
Revenue reserves and unappropriated profit	4	10 341 885	8 703 4[illegible]	9 695 579	8 355 293
		14 700 339	13 061 857	14 054 033	12 713 747
LOAN CAPITAL					
7% First mortgage debenture stock 1971/80	5	600 000	700 000	600 000	700 000
LONG-TERM LOAN					
7% Unsecured notes	6	3 125 652	3 125 977	3 125 652	3 125 977
OUTSIDE SHAREHOLDERS' INTEREST		2 672 012	2 424 379	—	—
		21 098 003	19 312 213	17 779 685	16 539 724
EMPLOYMENT OF FUNDS					
FIXED ASSETS	7	20 874 453	18 574 562	16 512 420	14 374 654
INTEREST IN SUBSIDIARY COMPANIES	8	—	—	3 365 145	3 736 195
INVESTMENTS	9	77 668	674 667	368	55 027
UNSECURED LOANS		167 000	127 000	—	—
LOAN PORTION OF TAXATION, excluding accrued interest		276 760	313 371	156 093	197 154
		21 395 881	19 689 600	20 034 026	18 363 030
CURRENT ASSETS					
Stocks		3 267 585	2 859 105	2 318 696	1 904 435
Debtors and prepayments	12	4 236 028	3 478 460	2 677 489	2 210 483
Deferred expenditure	15	670 368	50 114	670 368	50 114
Short term loans		11 125	11 125	11 125	11 125
Bank balances and cash		635 673	532 346	11 326	144 098
Taxation prepaid		724 763	205 648	723 921	205 428
		9 545 542	7 136 798	6 412 925	4 525 683
Deduct:					
CURRENT LIABILITIES					
Bills payable		1 894 266	—	1 894 266	—
Creditors and provisions	12	3 953 159	4 913 917	3 060 494	4 013 543
Current instalment and interest on loan capital	5	112 249	114 001	112 249	114 001
Dividends		426 000	426 000	426 000	426 000
Taxation		223 688	203 021	—	—
Bank overdraft		1 853 257	1 192 445	1 853 257	1 192 445
		8 462 619	6 849 384	7 346 266	5 745 989
NET CURRENT ASSETS (LIABILITIES)		1 082 923	287 414	(933 341)	(1 220 306)
		22 478 804	19 977 014	19 100 685	17 142 724
Deduct:					
DEFERRED TAXATION		1 426 000	710 000	1 321 000	603 000
		21 052 804	19 267 014	17 779 685	16 539 724
COST OF CONTROL OF SUBSIDIARY COMPANIES		45 199	45 199	—	—
		21 098 003	19 312 213	17 779 685	16 539 724

The attached notes form part of the accounts.

per: C. F. O. RADEMAN
Accountant.

DR. F. A. ZOELLNER
DR. W. J. DE VILLIERS
Directors

Revenue reserves and unappropriated profit	4	10 341 885	8 703 403	9 695 579	8 355 293
		14 /00 339	13 061 857	14 054 033	12 713 747
LOAN CAPITAL					
7% First mortgage debenture stock 1971/80	5	600 000	700 000	600 000	700 000
LONG-TERM LOAN					
7% Unsecured notes	6	3 125 652	3 125 977	3 125 652	3 125 977
OUTSIDE SHAREHOLDERS' INTEREST		2 672 012	2 424 379	—	—
		21 098 003	19 312 213	17 779 685	16 539 724
EMPLOYMENT OF FUNDS					
FIXED ASSETS	7	20 874 453	18 574 562	16 512 420	14 374 654
INTEREST IN SUBSIDIARY COMPANIES	8	—	—	3 365 145	3 736 195
INVESTMENTS	9	77 668	674 667	368	55 027
UNSECURED LOANS		167 000	127 000	—	—
LOAN PORTION OF TAXATION, excluding accrued interest		276 760	313 371	156 093	197 154
		21 395 881	19 689 600	20 034 026	18 363 030
CURRENT ASSETS					
Stocks		3 267 585	2 859 105	2 318 696	1 904 435
Debtors and prepayments	12	4 236 028	3 478 460	2 677 489	2 210 483
Deferred expenditure	15	670 368	50 114	670 368	50 114
Short term loans		11 125	11 125	11 125	11 125
Bank balances and cash		635 673	532 346	11 326	144 098
Taxation prepaid		724 763	205 648	723 921	205 428
		9 545 542	7 136 798	6 412 925	4 525 683
Deduct:					
CURRENT LIABILITIES					
Bills payable		1 894 266	—	1 894 266	—
Creditors and provisions	12	3 953 159	4 913 917	3 060 494	4 013 543
Current instalment and interest on loan capital	5	112 249	114 001	112 249	114 001
Dividends		426 000	426 000	426 000	426 000
Taxation		223 688	203 021	—	—
Bank overdraft		1 853 257	1 192 445	1 853 257	1 192 445
		8 462 619	6 849 384	7 346 266	5 745 989
NET CURRENT ASSETS (LIABILITIES)		1 082 923	287 414	(933 341)	(1 220 306)
		22 478 804	19 977 014	19 100 685	17 142 724
Deduct:					
DEFERRED TAXATION		1 426 000	710 000	1 321 000	603 000
		21 052 804	19 267 014	17 779 685	16 539 724
COST OF CONTROL OF SUBSIDIARY COMPANIES		45 199	45 199	—	—
		21 098 003	19 312 213	17 779 685	16 539 724

The attached notes form part of the accounts.

per: C. F. O. RADEMAN
Accountant.

DR. F. A. ZOELLNER
DR. W. J. DE VILLIERS
Directors

DUNSWART IRON STEEL & WORKS LIMITED

PROFIT AND LOSS ACCOUNTS

FOR THE YEAR ENDED DECEMBER 31, 1973

	Notes	CONSOLIDATED 1973 R	CONSOLIDATED 1972 R	COMPANY 1973 R	COMPANY 1972 R
PROFIT FOR THE YEAR BEFORE ALLOWING FOR THE ITEMS SHOWN BELOW		5 950 272	5 156 902	4 069 842	3 526 318
Add:					
Interest receivable		40 584	48 977	15 616	23 672
Dividends receivable:					
Trade investments		20	20	—	—
Other		—	974	—	974
Subsidiary companies		—	—	226 500	165 560
Profit on disposal of fixed assets		21 968	—	17 181	—
Profit on sale of investments (1972 loss)		4 239	(8 654)	8 658	(6 923)
		6 017 083	5 198 219	4 337 797	3 709 601
Deduct:					
Interest paid:					
Debentures and long term loan		318 732	240 710	318 732	240 710
Other		155 305	59 494	177 077	52 568
Depreciation of fixed assets	7 (b)	1 791 313	1 228 767	1 485 718	847 530
(Deduct) Depreciation transferred to deferred expenditure	15	(512 050)	—	(512 050)	—
Loss on disposal of fixed assets		—	55 660	—	53 856
		1 753 300	1 584 631	1 469 477	1 194 664
PROFIT BEFORE TAXATION		4 263 783	3 613 588	2 868 320	2 514 937
TAXATION	10				
South African normal tax on current profits		670 390	726 523	9 600	184 480
Add (Deduct):					
Prior years adjustment		(11 933)	(18 464)	(9 566)	(11 170)
Deferred taxation		716 000	338 000	718 000	349 000
		1 374 457	1 046 059	718 034	522 310
PROFIT AFTER TAXATION		2 889 326	2 567 529	2 150 286	1 992 627
Deduct:					
Profit attributable to outside shareholders		440 844	392 113	—	—
PROFIT ATTRIBUTABLE TO SHAREHOLDERS OF DUNSWART IRON & STEEL WORKS LIMITED		2 448 482	2 175 416	2 150 286	1 992 627
UNAPPROPRIATED PROFIT BROUGHT FORWARD		7 894 278	6 680 742	7 546 168	6 405 541
(*Deduct*): Adjustments	11	—	(143 220)	—	(34 000)
BALANCE AVAILABLE FOR APPROPRIATION		10 342 760	8 712 938	9 696 454	8 364 168
Dealt with as follows:					
Dividends:					
Preference No. 73		6 000	6 000	6 000	6 000
Preference No. 74		6 000	6 000	6 000	6 000
Ordinary No. 115 of 18 per cent		378 000	336 000	378 000	336 000
Final ordinary No. 116 of 20 per cent		420 000	420 000	420 000	420 000
Transfer to debenture redemption reserve		50 000	50 000	50 000	50 000
Preliminary expenses written off		—	660	—	—
		860 000	818 660	860 000	818 000
UNAPPROPRIATED PROFIT CARRIED FORWARD	4	9 482 760	7 894 278	8 836 454	7 546 168

The attached notes form part of the accounts

Trade investments		20	20	—	—
Other		—	974	—	974
Subsidiary companies		—	—	226 500	165 560
Profit on disposal of fixed assets		21 968	—	17 181	—
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Interest paid:					
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Depreciation of fixed assets	7 (b)	1 791 313	1 228 767	1 485 718	847 530
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		1 753 300	1 584 631	1 469 477	1 194 664
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South African normal tax on current profits		670 390	726 523	9 600	184 480
Add (Deduct):					
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UNAPPROPRIATED PROFIT CARRIED FORWARD	4	9 482 760	7 894 278	8 836 454	7 546 168

The attached notes form part of the accounts

DUNSWART IRON & STEEL WORKS LIMITED

NOTES ON THE ACCOUNTS

AT DECEMBER 31, 1973

	1973		1972	
	Authorised	*Issued*	*Authorised*	*Issued*
1. SHARE CAPITAL (Fully paid)				
6% Cumulative preference shares of R2,00 each	250 000	200 000	250 000	200 000
Ordinary shares of 50 cents each	4 000 000	2 100 000	4 000 000	2 100 000
	R4 250 000	R2 300 000	R4 250 000	R2 300 000

The unissued shares are under the control of the directors

2. SHARE PREMIUM ACCOUNT

The balance on the account is subject to the provisions of Section 86 quat of the Companies Act, 1926 (as amended)

3. CAPITAL RESERVE

Surplus arising on the revaluation of the company's freehold land and buildings in 1971.

	CONSOLIDATED		COMPANY	
	1973	1972	1973	1972
4. REVENUE RESERVES AND UNAPPROPRIATED PROFIT				
Debenture redemption reserve	675 000	625 000	675 000	625 000
General reserve	184 125	184 125	184 125	184 125
Unappropriated profit	9 482 760	7 894 278	8 836 454	7 546 168
	R10 341 885	R8 703 403	R9 695 579	R8 355 293

5. LOAN CAPITAL

The 7% first mortgage debenture stock is secured by a debenture mortgage bond over certain immovable properties of the company and by a collateral general covering bond over other assets both present and future. Redemption is by annual instalments of R100 000 on September, 30.

6. LONG TERM LOAN

The 7% unsecured notes are to be repaid on March 1, 1977 at par. The company has the right however to redeem the total amount on the following terms:—
(a) on March 1, 1975 at 101% of the principal amount.
(b) on March 1, 1976 at 100,5% of the principal amount.

7. FIXED ASSETS

(a) Freehold land and buildings				
At valuation	2 914 161	2 914 161	2 914 161	2 914 161
At cost	3 036 907	2 771 096	685 202	511 852
	5 951 068	5 685 257	3 599 363	3 426 013
Plant, vehicles, office machines and furniture, at cost	27 242 656	22 709 737	22 355 977	18 131 574
Less: Depreciation	12 818 564	11 208 612	9 523 183	8 186 838
	14 424 092	11 501 125	12 832 794	9 944 736
Capital work in progress, at cost	344 329	1 233 216	56 358	980 000
Mineral rights and prospecting expenditure, at cost	130 274	130 274	—	—
	20 849 763	18 549 872	16 488 515	14 350 749
Trade investments and advances, at cost	24 690	24 690	23 905	23 905
	R20 874 453	R18 574 562	R16 512 420	R14 374 654
Commitments for capital expenditure amount to approximately	R677 000	R2 474 000	R405 000	R2 300 000

(b) No provision has been made for depreciation or amortisation of freehold land and buildings, mineral rights and prospecting expenditure.

(c) Land purchased by a subsidiary company under a suspensive agreement is in process of being transferred into that company's name. The land and improvements effected thereon have been included at R794 391 (1972 — R793 497).

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The balance on the account is subject to the provisions of Section 86 quat of the Companies Act, 1926 (as amended)

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(b) No provision has been made for depreciation or amortisation of freehold land and buildings, mineral rights and prospecting expenditure.

(c) Land purchased by a subsidiary company under a suspensive agreement is in process of being transferred into that company's name. The land and improvements effected thereon have been included at R794 391 (1972 — R793 497).

	GEKONSOLIDEER		MAATSKAPPY	
	1973	1972	1973	1972
8. BELANGE IN FILIAALMAATSKAPPYE				
Aandele teen kosprys min bedrag afgeskryf — R5 000			111 244	111 244
Bedrae verskuldig deur filiale min voorsienings			3 253 901	3 624 951
			R3 365 145	R3 736 195
9. BELEGGINGS				
Genoteerde aandele, teen kosprys min bedrae afgeskryf	R77 668	R674 667	R3	R55 027
(Markwaarde)	(R75 220)	(R683 720)	(R360)	(R64 080)
10. BELASTING				
As gevolg van beleggings- en gebouevermindering wat op kapitaaluitgawes geëis is, is belasting vir die jaar verminder met	R404 560	R438 039	R375 133	R419 898
11. AANSUIWERINGS				
(a) 'n Verandering in die rekenkundige grondslag van 'n deel van die algemene drakoste-inhoud van voorrade het tot gevolg gehad dat die saldo van onaangewende wins op 31 Desember 1971 verminder is met		57 228		34 000
(b) Verliese van 'n filiaalmaatskappy tot 31 Desember 1971 wat toe te skryf is aan 'n oorspronklike belegging gehou voor die verkryging van beheer deur die beherende maatskappy		121 936		
Min: Bedrag voorheen voorsien in die rekeninge van die beherende maatskappy		35 944		
		85 992		
	—	R143 220	—	R34 000
12. BEHERENDE- EN MEDEFILIAALMAATSKAPPYE				
Die volgende is onderskeidelik by krediteure en debiteure ingesluit:				
Bedrae verskuldig aan beherende- en medefiliaalmaatskappye	R257 462	R6 866	R257 045	R6 506
Bedrae verskuldig deur beherende- en medefiliaalmaatskappye	R34 911	R20 404	R7 614	R13 969

13. BUITELANDSE BETAALMIDDELE

Laste in buitelandse betaalmiddele is omreken teen nagenoeg die heersende wisselkoerse op 31 Desember 1973.

14. DIREKTEURSBESOLDIGING				
Gelde — van die maatskappy en 'n filiaalmaatskappy			19 850	18 917
Bestuursvergoeding en ander voordele — van die maatskappy en 'n filiaalmaatskappy			63 017	72 845
			R 82 867	R91 762

15. UITGESTELDE UITGAWES

Uitgestelde uitgawes sluit in waardevermindering, bedryfs- en sekere ontwikkelingskoste van die sponsysteraanleg. Die direkteure is van mening dat ten minste hierdie bedrag verhaal sal word uit die opbrengs van uitstaande eise vir verlies van winste.

VERSLAG VAN DIE OUDITEURE

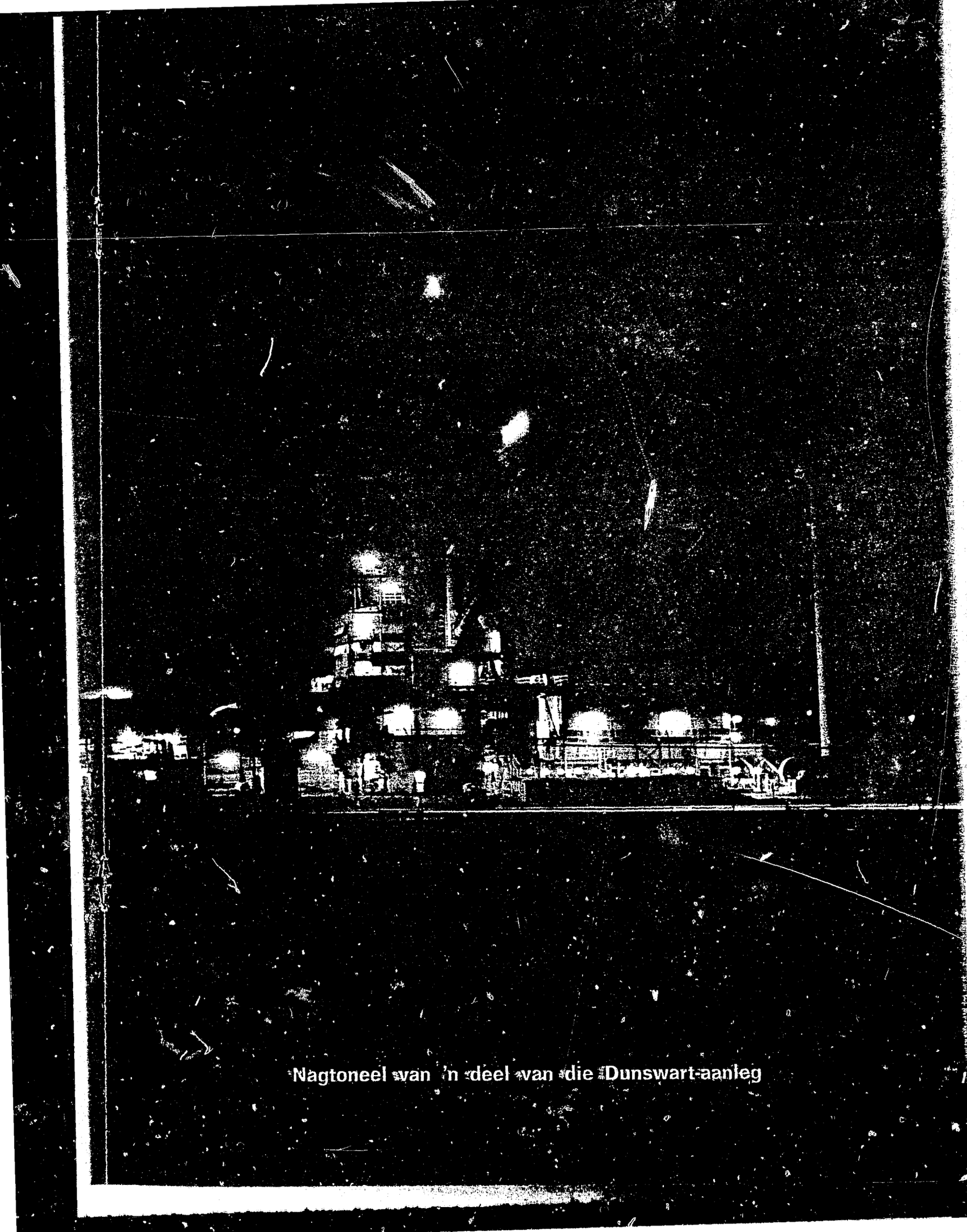
Ons het die boeke, rekeninge en bewysstukke van die maatskappy ondersoek in soverre ons dit vir doeleindes van ons oudit nodig geag het, en het al die inligting en verklarings verkry wat na die beste van ons wete en oortuiging vir die doel van ons ouditering nodig was. Ons het onsself van die bestaan van die sekuriteite vergewis. Na ons mening is behoorlike rekeningboeke deur die maatskappy gehou vir sover dit blyk uit ons ondersoek van daardie boeke.

Die bygaande balansstaat en wins-en-verliesrekening is in ooreenstemming met die rekeningboeke. Na ons mening en na die beste van ons inligting en volgens die verduidelikings aan ons verstrek, vervat die genoemde rekeninge die inligting wat kragtens die Maatskappywet, 1926 (soos gewysig) vereis word op die wyse daarin voorgeskryf en bied die balansstaat en wins-en-verliesrekening, onderskeidelik 'n ware en redelike weergawe van die stand van die maatskappy se sake soos op 31 Desember 1973 en van die wins vir die jaar wat op daardie datum geëindig het.

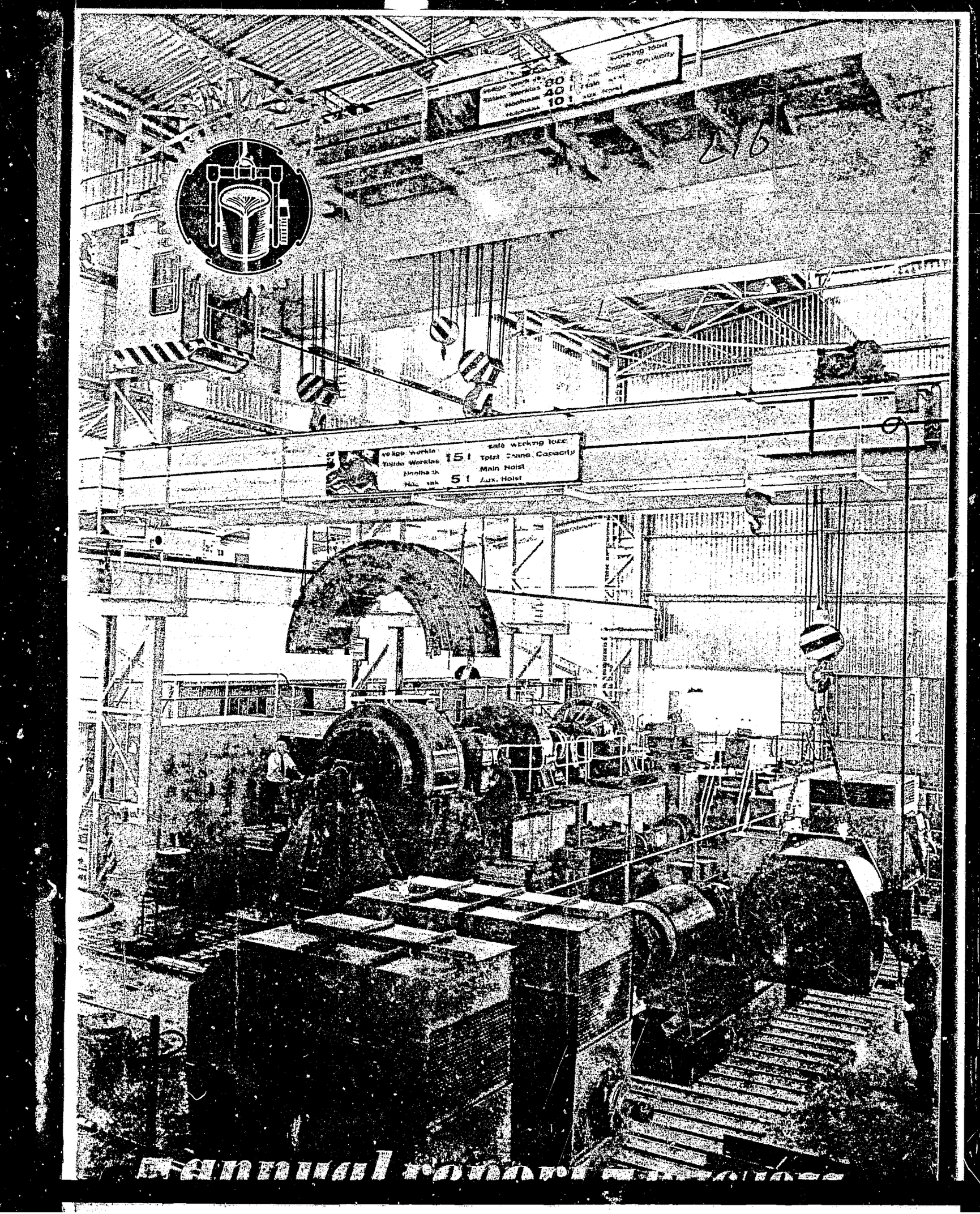
Ons het ook die bygaande gekonsolideerde balansstaat en gekonsolideerde wins-en-verliesrekening van die maatskappy en sy filiale, tesame met die geouditeerde rekeninge van daardie maatskappye nagegaan. Na ons mening is genoemde gekonsolideerde balansstaat en gekonsolideerde wins-en-verliesrekening, behoorlik opgestel in ooreenstemming met die bepalings van die Wet sodat dit 'n ware en redelike weergawe bied van die stand van sake en wins van die maatskappy en sy filiale sover dit lede van Dunswart Iron & Steel Works Beperk betref.

PEAT, MARWICK, MITCHELL & Co.
Geoktrooieerde Rekenmeesters (S.A.)

Carlton Centre,
Johannesburg.
21 Februarie 1974.



Nagtoneel van 'n deel van die Dunswart-aanleg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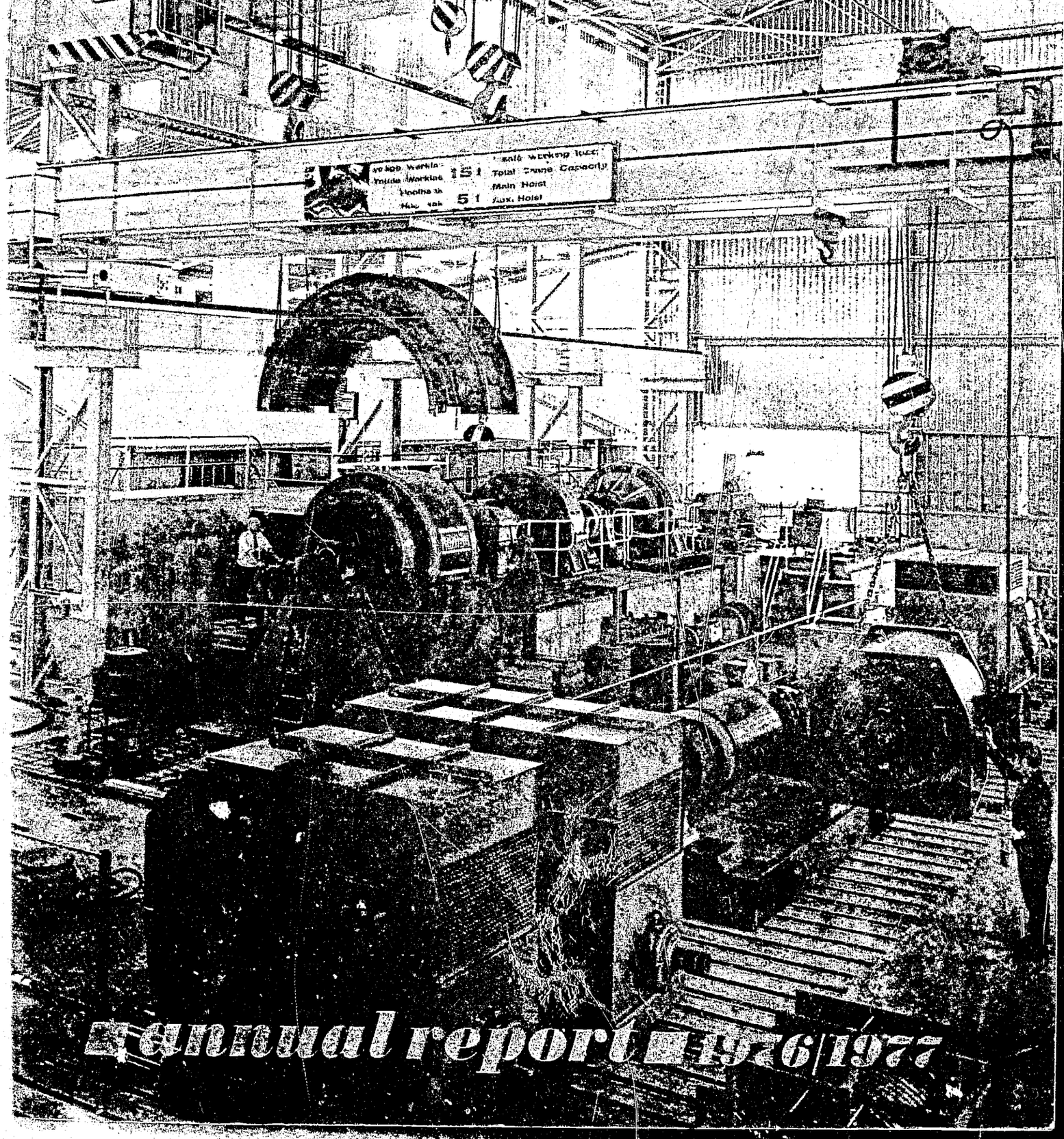
40 t
10 t
15 t
Total Crane Capacity
Main Hoist
5 t
Aux. Hoist



annual report 1976|1977

STEEL AND ENGINEERING INDUSTRIES FEDERATION OF SOUTH AFRICA

PRESIDENT

VICE PRESIDENTS

SEIFSA BOARD OF MANAGEMENT

SEIFSA FUNCTIONAL DIVISIONS

SEIFSA FUNCTIONAL DIVISIONS

SEIFSA COUNCIL

NATIONAL ASSOCIATIONS & BRANCHES

REGIONAL ASSOCIATIONS & SEIFSA DIVISIONS

INDIVIDUAL COMPANY MEMBERSHIP

SEIFSA MAIN DIVISIONS & UNITS

ADMINISTRATIVE DIVISION
- FINANCE & ACCOUNTS
- LIBRARY
- PUBLICATIONS
- PUBLIC RELATIONS
- SECRETARIAL SERVICES TO ASSOCIATIONS
- SEIFSA PARLIAMENTARY COMMITTEE AND LEGISLATION

BANTU LABOUR UNIT
- BANTU AFFAIRS ADMINISTRATION
- BANTU LABOUR RELATIONS ADVISORY AND LIAISON SERVICES
- BANTU WAGES AND PRODUCTIVITY
- IN-SERVICE TRAINING FOR BANTU
- NON-EUROPEAN AFFAIRS

ECONOMICS DIVISION
- CUSTOMS TARIFF MATTERS
- ECONOMIC SURVEYS RELATED TO THE SEIFSA SECTORS OF INDUSTRY
- IMPORT AND EXPORT MATTERS
- SEIFSA STATISTICS
- SPECIAL ASSIGNMENTS & REPORTS
- TAXATION
- TENDER & CONTRACT CONDITIONS
- TRANSPORTATION

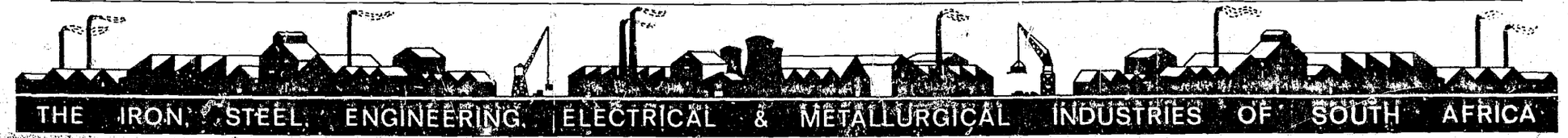
EDUCATION & TRAINING DIVISION
- APPRENTICE, TECHNICIAN AND EMPLOYEE TRAINING
- CAREERS GUIDANCE ADVISORY SERVICE
- CO-ORDINATION OF EDUCATION AND TRAINING
- METAL & ENGINEERING INDUSTRIES EDUCATION & TRAINING FUND ADMINISTRATION
- RECRUITMENT & PLACEMENT SERVICES
- SEIFSA BURSARY AWARDS ADMINISTRATION
- SEIFSA TECHNOLOGICAL FUND ADMINISTRATION

FUNDS ADMINISTRATION DIVISION
- ENGINEERING & ALLIED INDUSTRIES EMPLOYEES MEDICAL AID FUND
- METAL INDUSTRIES GROUP LIFE & PROVIDENT FUND
- METAL INDUSTRIES GROUP PENSION FUND
- METAL INDUSTRIES MEDICAL AID FUND
- SICK PAY FUND FOR THE IRON, STEEL ENGINEERING & METALLURGICAL INDUSTRY

COMMUNICATIONS UNIT
- INDUSTRIAL RELATIONS COMMUNICATION PROJECT - DEVELOPMENT AND IMPLEMENTATION

LABOUR DIVISION
- INDUSTRIAL LEGISLATION AND GENERAL LABOUR RELATIONS AND LIAISON
- NATIONAL INDUSTRIAL COUNCIL LIAISON
- NEGOTIATION OF INDUSTRIAL AGREEMENT TECHNICAL SCHEDULES
- NEGOTIATION OF INDUSTRIAL AGREEMENTS
- PARTICIPATION ON STATUTORY BODIES RELATING TO LABOUR MATTERS

TECHNICAL DIVISION
- LIAISON WITH
  S A BUREAU OF STANDARDS
  COUNCIL FOR SCIENTIFIC & INDUSTRIAL RESEARCH
  NATIONAL PRODUCTIVITY INSTITUTE
- METRICATION
- POLLUTION AND THE ENVIRONMENT
- STANDARDS
- STRUCTURING OF INDUSTRIAL AGREEMENT TECHNICAL SCHEDULES



THE IRON, STEEL, ENGINEERING, ELECTRICAL & METALLURGICAL INDUSTRIES OF SOUTH AFRICA

1977/1978
Officers and Board of Management

PRESIDENT:	W. N. Randell
VICE-PRESIDENTS:	C. D. Ellis R. T. Shaw Dr. J. P. Kearney
HONORARY VICE-PRESIDENTS:	W. E. Kirkwood Dr. C. M. Krüger W. L. Morrison J. M. Russell
MEMBERS:	W. G. Boustred J. P. Coetzee E. H. Dreyer J. E. D. Greenhorn I. S. Haggie H. C. H. Hutten T. M. King Dr. L. B. Knoll A. Moore J. Rae P. W. Sceales R. C. Throssell
CO-OPTED:	N. D. Baxter L. Boyd J. E. D. Bramwell D. Chapman A. L. Charles L. C. J. de Villiers J. C. de Waal D. I. Gray H.P. Joubert I. F. Kerr R. Mason H. K. Roseveare R. M. F. Seawright W. F. Spence I. L. Whitby F. C. Wilde
CO-OPTED TO REPRESENT SEIFSA DIVISIONS:	
Automotive Parts Manufacturing Division:	K. B. Wheelhouse
Electrical, Electronics, Telecommunication and Allied Industries Division:	J. W. Nelson
Engineering Industries Division:	A. L. Snell
Foundry Industry Division:	J. E. D. Greenhorn
Iron and Steel and Ferro Alloys Division:	J. P. Coetzee
Manufacturing Industries Division:	S. W. Knobel
Plastics Industries Division:	P. F. S. King
DIRECTOR:	Dr. E. P. Drummond

HEAD OFFICE	P.O. Box 1338, Johannesburg, 2000
DIVISIONAL OFFICES	
CAPE	P.O. Box 1536, Cape Town, 8000.
NATAL	P.O. Box 1300, Durban, 4000.
BORDER	P.O. Box 27, East London, 5200.
MIDLANDS	P.O. Box 2221, Port Elizabeth, 6063.
TRANSVAAL	P.O. Box 1338, Johannesburg, 2000.

Members of the Council

The SEIFSA Council is composed of representatives and alternates of Associations and Divisions within SEIFSA, together with persons specially appointed under the relevant provisions of the Federation's Articles of Association.

NAME	COMPANY
Baskind, C.	Teltron (Pty) Limited
Baxter, N. D.	Dorman Long Vanderbijl Corp. Limited
Beard, J. P.	Day-Nite Safety Burglar Alarms (Pty) Ltd.
Beukes, W. J. (Alternate)	Union Steel Corp (of South Africa) Ltd.
Black, J. A.	Otis Elevator Company Limited
Boustred, R. A.	Scaw Metals Limited
Boustred, W. G.	Scaw Metals Limited
	Highveld Steel and Vanadium Corp. Ltd.
Boyd, L.	Highveld Steel and Vanadium Corp. Ltd.
Braddock, D. (Alternate)	Tubemakers of South Africa Limited
Bramwell, J. E. D.	The Roberts Construction Company Limited
Brass, C. R. (Alternate)	Dorman Long Vanderbijl Corp. Limited
Bryce, J. R. (Alternate)	Natal Engineering Industries Association
Burle, R. M. (Alternate)	Castle Brass Works (Pty) Limited
Campbell, C. V.	Steeledale Reinforcing & Trading Co. Ltd.
Chapman, D.	Irvine Chapman & Co. (Pty) Ltd.
Charles, A. L.	GEC South Africa Limited
Chaskelson, J.	Steelcraft Manufacturing Co. (Pty) Ltd.
Clewlow, W. A. M. (Alternate)	Barlows Television Company
Coetzee, J. P.	S.A. Iron & Steel Industrial Corp. Limited
Collins, A. W. J. (Alternate)	Matheson & Bremner (Pty) Ltd.
Coningsby, J.	Elga Engineering (Pty) Ltd.
Cooke, B. (Alternate)	Otis Elevator Company Limited
Cormell, R. A. (Alternate)	Guestro Industries (Pty) Ltd.
Crawford, K. J.	Huletts Aluminium Limited
Crawford-Brunt, R. J. (Alternate)	Dorman Long Vanderbijl Corp. Limited
de Jonge, J.	Silverton Engineering
de Villiers, L. C. J.	S.A. Iron & Steel Industrial Corp. Limited
de Waal, J. C.	Union Steel Corp. (of South Africa) Ltd.
Dreyer, E. H.	Scaw Metals Limited
du Preez, H. (Alternate)	Vosa Valves (Pty) Ltd.
Edmunds, S. (Alternate)	Dialoy Africa (Pty) Ltd.
Ellis, C. D.	Dorman Long Vanderbijl Corp. Limited
Emanuel, L. J. (Alternate)	Defy Industries Limited
Engelbrecht, J. (Alternate)	General Mining & Finance-Korporasie Beperk
Ewer, G. A. (Alternate)	R.S. Trivett & Co. (Pty) Ltd.
Fear, V. F. (Alternate)	Auto Industrial (Pty) Limited
Ferguson, P. N. (Alternate)	Reinforcing & Allied Industries (Pty) Ltd.
Ferry, G. E.	Atlantic Foundry (Pty) Ltd.
Fiander, C. S.	Almaks Engineering (Pty) Limited
Flinn, J. A.	Mather & Platt (S.A.) (Pty) Limited

Foley, J. (Alternate)	EMI Minerva (S.A.) (Pty) Ltd.
Frank, F. (Alternate)	ASEA Electric S.A. Limited
Gardner, M. S.	Winding Wires (Pty) Limited
Geyser, E. R. (Alternate)	Siemens Limited
Godwin, H. A. (Alternate)	Stewarts & Lloyds of S.A. Limited
Goldman, M. (Alternate)	Steelbrite Industries (Pty) Ltd.
Goodwin, A. H. (Alternate)	Epwin Engineering (Pty) Ltd.
Gray, D. I.	Standard Telephones & Cables (S.A.) (Pty) Ltd.
Greenhorn, J. E. D.	Light Castings (Pty) Limited
Gruss, A. I.	Metal Sales (Benoni) (Pty) Limited
Gunning, A. J. (Alternate)	Alert Fencing Contractors (Pty) Ltd.
Haggie, I. S.	Haggie Steel Ropes Limited
Hall, J. C. (Alternate)	Southern Cross Steel Co. (Pty) Ltd.
Ham, D. J.	Searle-Bush Africa Limited
Hancock, J. I. (Alternate)	Mining & Industrial Air Conditioning (Pty) Ltd.
Hancox, R. N.	Sperry Rand (S.A.) (Pty) Limited
Heiss, H. (Alternate)	Hytec of Southern Africa (Pty) Ltd.
Hendler, S. (Alternate)	Hendler & Hendler (Pty) Limited
Herr, C. M.	Jacks Fencing & Engineering Works (Pty) Ltd.
Hess, J. M. (Alternate)	Non-Ferrous Metal Works (Tvl) (Pty) Ltd.
Holsteyn, H. W. (Alternate)	H.M. Machine Tools
Horsley, R. M.	Andrews Alarms (Pty) Ltd.
Howard, J. A. O. (Alternate)	Hall-Thermotank Natal Limited
Hutten, H. C. H.	S.A. Iron & Steel Industrial Corp. Limited
Hyslop, L. D. (Alternate)	Flather Bright Steels (Pty) Ltd.
Jackson, K. (Alternate)	Dorman Long Vanderbijl Corp. Limited
Jacobs, D. A. (Alternate)	Metal Box (South Africa) Limited
Joubert, H. P.	General Erection Co. (Pty) Ltd.
Kalk, E. F. (Alternate)	S.A. General Electric Co. (Pty) Ltd.
Kearney, Dr. J. P.	S.A. Manganese Amcor Limited
Kerr, I. F. (Alternate)	R. Hunter & Co. (Pty) Limited
King, P. F. S.	van Leer S.A. (Pty) Limited
King, T. M.	Stewarts & Lloyds of South Africa Limited
Kirkwood, W. E.	Constructional Engineering Association
Kirschner, N.	Reyrolle Parsons of South Africa Limited
Klip, C.	Cape Steel Construction Co. (Pty) Ltd.
Knobel, S. W.	Lasher Tools (Pty) Limited
Knoll, Dr. L. B.	Massey Ferguson (S.A.) Limited
Krohn, O. E. (Alternate)	Fry's Metals Limited
Krüger, Dr. C. M.	ASEA Electric South Africa Limited
Lee, D. L.	Bright Metals (Pty) Ltd.
le Roux, W. C. (Alternate)	L.M. Nywerhede Ko-Operatief Beperk
Lion-Cachet, D.	Durab Industries (Pty) Limited
Lipa, M.	Supreme Flanges (Pty) Ltd.
McCormick, J. C.	Josiah Parkes & Sons (South Africa) Ltd.
MacKie, E. V.	James Brown & Hamer Limited
MacWhirter, G. A.	Ex Officio
Makepeace, W. (Alternate)	Wil-Make (Pty) Limited
Malan, P. L. (Alternate)	Premier Metal Co. of S.A. (Pty) Ltd.
Mason, R.	SAFIM Manufacturing Limited
Moore, A.	Albert Moore (Pty) Limited
Morrison, W. L.	Natal Engineering Industries Association
Morshead, G. V. (Alternate)	Wireco Weldedmesh (Pty) Limited
Nel, D. M. (Alternate)	Pretoria Electro-Plating Works (Pty) Ltd.
Nelson, J. W.	Bonar Long N.T.C. (S.A.) (Pty) Ltd.
Owen, R. E.	Aberdare Cables Africa Limited
Patterson, W.D.	Schindler Lifts S.A. Limited
Peake, H. C.	Mono-Pumps (Africa) (Pty) Ltd.
Pearson, G. (Alternate)	Pearson Manufacturing Co. (Pty) Ltd.
Per, S.	Jeppe Plumbing & Sheet Metal Mnfrs (Pty) Ltd.
Pilgrim, F.	Dorman Long Vanderbijl Corp. Limited

Place, C. E. S.	National Bolts Limited
Rae, J.	McKechnie Bros. S.A. (Pty) Ltd.
Randell, W. N.	African Cables Limited
Reynolds, I. W.	Otis Elevator Company Limited
Rice, F. V.	Umgeni Iron Works (Pty) Ltd.
Roos, J. F. (Alternate)	Cape Engineers & Founders' Association
Rose, R.	Industrial Conveyors (Pty) Limited
Roseveare, H. K.	Hall-Thermotank Africa Limited
Rubin, H.	Fuchs Electronics (Pty) Limited
Russell, J. M.	Globe Engineering Works Limited
Sceales, P. W.	Dorman Long Vanderbijl Corp. Limited
Schalkwyk, P. L.	C. & C. Electro-Plating Works (Benrose) (Pty) Ltd.
Schermer, Dr. K. (Alternate)	Dunswart Iron & Steel Works Limited
Schulz, P. F. W.	Consolidated Brassfoundry (Pty) Ltd.
Scott, E. R.	Edac (Pty) Limited
Seawright, R. M. F.	The Steel Engineering Company Limited
Shaw, R. T.	Cementation Engineering (Pty) Limited
Short, N. G.	McKechnie Bros. S.A. (Pty) Ltd.
Simmons, J.	Union Carriage & Wagon Co. (Pty) Ltd.
Slome, B. (Alterriate)	Television & Electrical Dist. (Pty) Ltd.
Smith, R. D. (Alternate)	Plessey South Africa Limited
Smith, S. H. (Alternate)	Modern Engineering Works (Pty) Ltd.
Snell, A. L.	Barlows Heavy Engineering Limited
Spence, W. F.	Stewarts & Lloyds of South Africa Limited
Stehr, H. J. H.	Ainsworth Engineering (Pty) Ltd.
Streicher, P. E.	Metallcys Limited
Swarts, C. C. (Alternate)	Hawker Siddeley (Transformers) (Pty) Ltd.
Thompson, W. D. (Alternate)	SAFIM Manufacturing Limited
Throssell, R. C.	Throssell Engineering Co. (Pty) Ltd.
Topper, B. G. A.	Haggie Rand Limited
Trotskie, J. de W. (Alternate)	Siemens Limited
van den Berg, A. J.	Industrial Development Corp. of S.A. Limited
van Zyl, D. J. (Alternate)	Ferrovorm Limited — Gearings Foundry Division
Vergunst, M.	Hall-Thermotank Africa Limited
Viljoen, J. P. (Alternate)	R.W. Tools (Pty) Limited
Wentzel, I. F. (Alternate)	McKinnon Chain (S.A.) (Pty) Limited
Wheeler, P.	General Mining & Finance-Korporasie Beperk
Wheelhouse, K. B.	DORBYL Metal Pressings Limited
Whitby, I. L.	Nordberg Manufacturing Co. (S.A.) (Pty) Ltd.
Wilde, F. C.	Borg-Warner S.A. (Pty) Limited
Wintour, P. F.	Reinforcing & Allied Industries (Pty) Ltd.
Young, A. S. (Alternate)	Port Elizabeth Engineers' Association

CO-OPTED TO REPRESENT SEIFSA DIVISIONS:

Automotive Parts Manufacturing Division:	K. B. Wheelhouse
Electrical, Electronics, Telecommunication and Allied Industries Division:	J. W. Nelson
Engineering Industries Division:	A. L. Snell
Foundry Industry Division:	J. E. D. Greenhorn
Iron and Steel and Ferro Alloys Division:	J. P. Coetzee
Manufacturing Industries Division:	S. W. Knobel
Plastics Industries Division:	P. F. S. King

President's address

Address of the President, Dr. J. P. Kearney, delivered to the Thirty-Fourth Annual General Meeting of the Steel and Engineering Industries Federation of South Africa held in the Board Room, First Floor, Metal Industries House, 84 Marshall Street, Johannesburg, on Thursday, 20th October, 1977 at 12 noon.

Last year, in his address to the SEIFSA Annual General Meeting, my predecessor in office indicated that in the immediate period prior to his taking office the levels of economic activity in the various metal and engineering group sectors recorded divergent performances. Furthermore during his period of office downtrends were recorded in almost every sector of our group. Regrettably during my year of office without exception the downslide has continued and we have been faced with a deepening recession. Under-utilised productive capacity is generally the order of the day with outputs decreasing and with problems of keeping labour in full employment. In a number of our sectors substantial lay-offs of labour have occurred and in an endeavour to mitigate the social consequences, work has been spread over the available labour force in many plants and short time working has been introduced to keep work people gainfully occupied. A number of our sectors have been adversely affected as a result of spill-overs affecting them, resultant in similar downtrends being experienced and associated with secondary industry in general; the large scale drop in building and construction activities; marked slow-downs in the motor assembly plant activities; cut backs and postponements in certain important capital investment projects and a drop in expenditures in the public sector and infrastructure schemes.

On the positive side certain sectors so far as we are concerned are already benefiting from the workload, resultant upon the SASOL II project which has brought about the need to make provision for special training schemes for the specialised classes of labour to man and carry out the engineering aspects of this important and national strategic contract. Certain regions in our group are worse hit than others and the coastal areas are particularly hard hit because of the economic conditions in those particular areas.

The fortunes of the metal and engineering industries group as suppliers of capital plant and equipment and service industries, and suppliers of durable consumer goods, are particularly sensitive to and reliant on the economic performances of other groups, investment and consumer demand.

Nevertheless the groups, particularly in the iron and steel sector, have been able to increase their export performances tonnage-wise, notwithstanding a decrease in local demand for their basic products. This has been done despite the difficult conditions in the international market and similarly the ferro-alloy producers have maintained and in some cases bettered their export performances. The going, however, in the future for these two important basic sectors of our group will become more difficult unless there is an upturn and revival in the domestic economies of some of our overseas trading partners with which we have involvement.

Against the above sombre background it is understandable that so far as capital expenditure is concerned in our own group of industries and due to under-utilised productive capacity in many instances, capital expenditure is not running at the levels previously recorded and that cut-backs and re-planning have occurred. This is reflected in our studies which reveal that in the basic metal industries which comprise iron and steel and ferro-alloy production, the foundries and production of non-ferrous metals and semis, capital expenditure for the year 1976 amounted to R624 million; and in the Metal and Fabricating and Engineering Industries sector outlay was R211 million. For 1977 the projections for the two groups that I have mentioned will drop to R407 million and to R197 million respectively. In other words capital expenditure for all sectors in the Metal and Engineering Industries, which in 1976 amounted to R835 million, will drop to R604 million in 1977. This is clear evidence of the curtailments of capital expenditure in our group and as curtailments and cut-backs have taken place in other sectors of our economy, particularly in the general manufacturing field, and as our group are partial suppliers of such capital plant and equipment, we are being hit from many sides when public sector downturn on capital expenditure is also taken into account.

Expressed in monetary terms, total capital expenditure at current prices in the SEIFSA Industries reflects the following trends:-

1973 — R571 million

1974 — R757 million

1975 — R891 million

1976 — R835 million

Financing costs for investment programmes continue to remain high. The economic downturn situation as well as the incidence of corporate taxation and the funding of even reduced inventories and work in progress, has put many companies into over-tight cash flow situations.

In the light of the overall position reflected, and in my view, it would not be unreasonable for the authorities to continue to indulge in further selective re-stimulation of the economy in those sectors and industries where an over-soft situation has developed. We are aware of the adverse affects which over-stimulation would generate at the same time, but we are of the view that it is necessary to bring about a selective upswing and to reverse the continued downtrends because of not only overall economic considerations, but the socio-economic implications of the growing number of unemployed persons.

A phenomenon so far as our group is concerned is a tendency to switch, because of financial stringency, to leasing of assets. This has become increasingly pronounced in the Metal, Fabricating and Engineering sectors of our groups. At date leased assets and lease backs in land and buildings and capital plant and equipment runs at R406 million.

The result of a study conducted by SEIFSA and two of its sister national organisations into the whole question of possible savings to South Africa's import bill thus affecting the Republic's balance of payments situation, revealed that amounts up to R1 000 million a year could be saved if a policy of import displacement and import replacement recommended in the report were implemented. The report which has been released is a massive document which reflects the examination of a sample of 315 firms and a close examination of some 715 products. The implications of the report are wide but represent an area within which local manufacturers should set their targets.

A tendency which has developed is the fact that primarily the capital goods field of overseas manufacturers exporting to South Africa are being credit-financed at nominal rates of interest and allow the South African purchasers to secure deferred repayment terms. This is particularly significant in contracts where project finance is provided. These deferred credit facilities make it difficult for local contractors to compete. If similar facilities were made available to South African manufacturers this would equalise their competitive position, not only in the local market but also in the export markets. We are aware of the facilities provided to capital goods

exports through the Industrial Development Corporation and facilities through the Credit Guarantee Insurance Corporation, but to provide funds on the magnitude and on the advantageous terms available to overseas manufacturers would be a formidable task. It is suggested that the authorities should examine in all seriousness whether an export/import bank could not be especially tailored in South Africa to be superimposed upon the existing banking and financial institutions. The absence of adequate project finance and comparable terms is one of the many complementary factors whereby the South African manufacturer and fabricator find themselves edged out of the South African market and not always able to penetrate international export markets.

In the same context I must make an appeal for all of us and the community at large to "Buy South African". This will give an impetus to our economy apart from generating self-sufficiency where this can be achieved. It also goes without saying that so far as "services" are concerned, whether in transport, insurance or financial fields, the same philosophies should apply.

The rate of inflation during the year under review is still regarded as being too high and is affecting operating costs and eroding profits.

Because of the need to conserve financial resources and cash flows due to financing costs, the tendency exists to run down inventories of raw materials and components where this can be achieved.

The magnitude of the contribution that the SEIFSA industries make to the Republic of South Africa is borne out by the following:-

The gross output of the Metal and Engineering Industry sector of the economy now amounts to R8 000 million per annum and constitutes 26 per cent of the total manufacturing output for the Republic.

The number of work people of all races employed in our industries engaged in productive processes is marginally down because of economic factors and lay offs to 460 000. Our labour force represents one third of the total manpower engaged in all manufacturing activity throughout the Republic.

Last year our sectors exported products to the value of R650 million. Apart from ferro-alloys, pig iron and basic steel products, the bulk of our exports of manufactured goods was to our neighbours in the African continent.

Five of our member firms received commendations in the export award scheme, of which two companies were presented with medallions by the Hon. the Minister of Economic Affairs at a banquet held in Johannesburg during August 1977. We extend our congratulations to all concerned on their outstanding export performances.

During 1976, crude steel production was 7 158 500 tonnes; pig iron production 5 795 200 tonnes and ferro-alloy production 823 100 tonnes.

During the same period, the production of iron and steel castings was 713 200 tonnes, whilst non-ferrous metal foundries produced 23 550 tonnes.

SEIFSA continues to participate in the deliberations of the Prime Minister's Economic Advisory Council and of its ad hoc sub-Committees including the Committee dealing with the better utilization of labour.

The Collective Campaign against Inflation Manifesto, originally signed in Pretoria in October 1975 and to which SEIFSA was a signatory, so far as the short term objectives were concerned expired on 31st March 1977.

In retrospect it is the view of SEIFSA that there is no doubt that the collective programme against inflation did have psychological and practical effects in stemming inflationary pressures by virtue of the constraint and absorption factors written into the manifesto as such.

In the field of Industrial Relations after protracted negotiations with our workers for over 16 weeks, our new industrial agreements came into operation on the 1st September, 1977, and will run until the 30th June, 1978. The percentage increases on base rates varied from 3,81% for the highest grades to 7,27% on base rates for the lowest grades.

Concurrent with these changes the Supplementary Industrial Agreement providing for the advancement of Black workers and the creation of new job opportunities for such workers was renewed and was part of the overall package. This means that this supplementary agreement continues to enable under certain procedures and conditions Black workers to be employed and promoted within the whole spectrum of skilled and semi-skilled jobs rated at D, C, B and AB specified in our Industrial Agreements.

The Agreements to which I have referred which came into operation on the 1st September, were negotiated with the ten trade unions under the aegis of the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry. Accredited Black worker representatives also participated in the national negotiations in terms of the procedures laid down under the law for their participation. I wish to place on record our appreciation for the responsible and realistic attitudes of the trade unions and the accredited Black worker representatives displayed during the recent wage negotiations, especially when viewed against the dispute situations which developed during the collective bargaining, but which were resolved by all participants.

Of interest is the trade union participation on the Study and Action Committee and the Special Labour Projects Committee of the Industrial Council and the structuring of special training facilities for workers in connection with the manning of contracts of national strategic importance wherein certain of our sectors

are engaged on a contract basis. This has created new job opportunities and the training and re-training arrangements laid down cater specifically for these situations through the application of a revised levy/grant training plan.

In the training and re-training field, our overall Metal and Engineering Industries Education and Training Fund from September 1971 has to date paid out grants to employers for the training of specified classes of labour amounting to R21 million.

The training of Black workers conducted in the training centres through the Department of Bantu Education and in-plant training activities continues, despite the economic downturn and less demand for certain classes of labour. The tax concessions applicable in such circumstances continue to act as a training stimulus.

Our SEIFSA Bantu Labour Unit continues to function satisfactorily with excellent service to members and is improving communications and continues to propagate the establishment of liaison committees under the Bantu Labour Relations Regulation Amendment Act. The principal SEIFSA Committee which operates under the SEIFSA Bantu Labour Unit was re-structured and Black worker representatives now sit on the Committee jointly with management representatives. This extension of Black worker participation in matters concerning the overall industrial interests has proved a worthwhile experiment and is improving two-way communications in the fields which the Committee's terms of reference cover.

The SEIFSA Communications Unit is now fully in operation and viable and is making an effective impact in promoting and improving industrial relations at plant level between top management, supervisory management and various classes of workers. Initial objectives and plans have been put into effect and an assessment as to the effectiveness and receptivity of its work is being conducted. The Unit is making a positive contribution to management/worker communications.

SEIFSA continues to give point and urgency to training in the broadest context and within the parameters of our constantly changing labour patterns. The socio-political situations are not ignored. Through our collective bargaining mechanisms and worker co-operation, we have continued as in the past year to secure change and provide new job re-alignments benefiting the total spectrum of our multi-national labour force. Much work still has to be done in this field, but change is taking place with the co-operation of the trade unions with which we work.

It is obvious that new horizons are clearly signposted for our future development. We will work towards the objectives which we have set and will press for the removal of all kinds of discrimination in the field of our labour relations structures, bearing in mind the necessity to provide for job opportunities and the creation of skills for all our classes of workers in a technically orientated group of industries such as ours, for we represent the largest single group of industries in the Republic. We have thus an important role to play in the development of the economy, not only in the Republic of South Africa, but in the sub-continent. We thus take note of the fact that two important Commissions have been appointed by our Government to examine certain matters which are of concern to us, particularly the field of industrial relations and the promotion of industrial peace. Thus far, our group of industries has been able to manage its affairs within the parameters of the laws and structures relating to our collective bargaining arrangements which govern relationships between management and workers. We thus welcome the appointment of the one-man Commission of the Prime Minister's Economic Adviser, Dr. P.J. Riekert and also the Commission under the chairmanship of Professor N. E. Wiehahn, which will, inter alia, enquire into labour legislation in South Africa. We hope to be able to make meaningful suggestions and contributions to the work of these two Commissions because we are of the view that so far as our future development is concerned as a group of industries, certain structural and fundamental changes are desirable. An examination and appraisal of procedures, laws and imposed restraints comes at an appropriate juncture in our history and changes which are well founded and if brought about as a result of the work of the Commissions will be welcomed and beneficial.

We are happy that our Director, Dr. E. P. Drummond has been appointed a Member of the Wiehahn Commission because of his involvement and exposure to industrial relations with particular reference to our group of industries during his long association with SEIFSA.

In concluding this address I should like to record on your behalf our thanks to the Chairmen and members of:-

- The Economic Affairs Committee and its sub-Committees;
- The Technical Training Committee and its sub-Committees;
- Non-European Affairs Central Committee and its sub-Committees;
- Metal and Engineering Industries Education and Training Board;
- Communications Project Committee

for the excellent work they have done during the past year.

I should also like, on your behalf, to express my thanks to the Chairmen of the seven functional divisions of SEIFSA and to the office bearers and executive committees of our constituent Associations for their specialist and time-consuming work on behalf of SEIFSA.

Lastly, I should like to thank my Vice-Presidents and

METAL INDUSTRIES MEDICAL AID FUND AGREEMENT

The Agreement, which expires on 28th April, 1980 continues to provide medical and dental benefits to members and their dependants.

ENGINEERING AND ALLIED INDUSTRIES EMPLOYEES' MEDICAL AID FUND AGREEMENT

The Agreement providing for medical aid benefits for lower paid workers, members of trade unions, became operative on 17th February, 1975. Benefits from the Fund apply in respect of the member only and not dependants.

SICK PAY FUND AGREEMENT FOR THE IRON, STEEL, ENGINEERING AND METALLURGICAL INDUSTRY

Benefits from the Fund were increased by approximately 10% with effect from 1st August, 1976. The Agreement expires on 28th April, 1980.

SEIFSA TECHNOLOGICAL FUND AGREEMENT. METAL AND ENGINEERING INDUSTRIES EDUCATION AND TRAINING FUND AGREEMENT

These Agreements are still current. Revision of the Education and Training Fund Agreement to cater for new designated trades has been effected. The grant provisions of the Fund have been extended in respect of employers training employees in terms of the Journeyman Recognition Scheme.

SOUTH AFRICAN EMPLOYERS' CONSULTATIVE COMMITTEE ON LABOUR AFFAIRS

SEIFSA continues as a member of the above committee, which deals with national and international labour affairs. During the year the Committee prepared two Memoranda which were submitted to the sub-Committee on skilled manpower needs. These were —

(i) Memorandum on "Co-ordination of Training of Industrial Labour and Decentralisation Guidelines".
(ii) Memorandum on "A National Manpower Development Plan".

INSTITUTE OF LABOUR RELATIONS — UNISA

SEIFSA is a member of the Institute of Labour Relations at the University of South Africa. SEIFSA is also represented on the Board of Management and on the Projects Committee of the Institute.

NATIONAL INDUSTRIAL COUNCIL — STUDY AND ACTION COMMITTEE

This Committee has been appointed to examine the forward labour requirements of the Metal and Engineering Industries.

NATIONAL INDUSTRIAL COUNCIL — SPECIAL PROJECTS LABOUR CONTROL COMMITTEE

Arising from the discussions at the Study and Action Committee, a special committee has been appointed to ensure that an adequate supply of trained labour is available for special projects such as SASOL II and the uranium enrichment facility.

An Agreement has been structured by the Committee to cater for employees on the SASOL II project. The Agreement is based on a levy/grant system and provides a lump sum payment for employees who are trained to higher skills and who remain on the project for a fixed period of time utilising those skills.

MOTOR AND ENGINEERING INDUSTRIAL COUNCILS

The National Demarcation Liaison Committee which operates to determine demarcation issues arising between the two industries has met regularly during the past year.

FURNITURE AND ENGINEERING INDUSTRIAL COUNCILS

The joint Demarcation Liaison Committee of the respective Councils in the Transvaal is still extant although no meetings of the Committee were necessary during the past year.

MANPOWER BOARD

SEIFSA is represented on the Board which is constituted under the Defence Act.

NATIONAL OCCUPATIONAL SAFETY ASSOCIATION

SEIFSA collaborates closely with the Association and is represented on the Board of Directors and on Regional Committees.

UNEMPLOYMENT INSURANCE BOARD

SEIFSA is represented on the Board, which continues to meet monthly to monitor and control the administration procedures of the Unemployment Insurance Act. Amendments to the Unemployment Insurance Act were brought into operation on 1st July, 1977.

The contributions by employer and contributor are now based on a percentage of the earnings of contributors.

COMMITTEE ON BETTER UTILISATION OF MANPOWER

SEIFSA continues to be represented on the Committee which is a sub-Committee of the Prime Minister's Economic Advisory Council which meets regularly.

A sub-Committee has been established to deal specifically with the skilled manpower needs of the Republic.

CHAMBER OF MINES AND ENGINEERING INDUSTRY

Liaison between the Chamber of Mines and SEIFSA continues and close co-operation is maintained on labour matters.

SEIFSA — ORGANISATIONAL STRUCTURE

The Functional Divisions of SEIFSA which were established to improve communication between the individual Associations and the SEIFSA Board of Management and Council met to consider the proposals for amendment of the Main Agreement.

The Divisions concerned are:

1. Automotive Parts Manufacturing Division
2. Electrical, Electronics, Telecommunication and Allied Industries Division
3. Engineering Industries Division
4. Foundry Industry Division
5. Iron and Steel and Ferro Alloys Division
6. Manufacturing Industries Division
7. Plastics Industries Division

Chairmen of the functional Divisions have been co-opted to the SEIFSA Board of Management and Council to ensure co-ordination of the liaison procedures.

DEFENCE LIAISON COMMITTEE

SEIFSA is represented on the Committee which has been established to ensure liaison between major employer organisations and the senior officers of the S.A. Defence Force. Members of the Liaison Committee met the Minister of Defence, the Chief of the Defence Force and the Chief of Staff (Operations) in Cape Town and were briefed on the security situation and the manpower requirements of the Defence Force.

COMMISSION OF INQUIRY INTO LABOUR LEGISLATION

A Commission has been appointed to enquire into all aspects of labour measures administered by the Departments of Labour and of Mines. The Commission is required to report on and make recommendations with specific reference to the adjustment of the existing system of labour regulations to provide more effectively for the needs of the country.

SEIFSA is preparing a memorandum for submission to the Commission of Inquiry.

WORK RESERVATIONS

Evidence was submitted to the Industrial Tribunal concerning the need to withdraw certain work reservation prescriptions operative in the Metal and Engineering Industries in terms of the Industrial Conciliation Act.

BANTU LABOUR UNIT

INDUSTRIAL RELATIONS

The Unit continued to receive requests from member firms for advice on the establishment of effective management/worker communication processes, with emphasis on the education and training of shopfloor supervisory management, human relations, culture appreciation and the ability to handle conflict situations at work. Liaison has been maintained with the appropriate authorities and SEIFSA member companies concerning riots and unrest in urban Bantu townships, particularly in regard to the interruptions in normal commuting arrangements and intimidation of workers in the townships and the effect on absenteeism and labour relations.

LIAISON COMMITTEES

The Bantu Labour Unit has assisted member companies in the effective establishment and functioning of Liaison Committees by providing guidelines, training of Black workers by the SEIFSA Bantu Liaison Officers, and by monitoring the conduct and progress of committee meetings at the request of individual companies. Advice has been given on the restructuring and re-establishment of committees which are due for re-election or have become inactive, and the Unit has assisted with the translation of constitutions, notices and other documentation into the various Black languages.

MANAGEMENT TRAINING IN INDUSTRIAL RELATIONS

The Bantu Labour Unit has maintained a close liaison with the SEIFSA Communications Unit on the launching of the management training programme and the development of certain training modules which will become available to SEIFSA member companies through the Communications Unit.

SEIFSA NON-EUROPEAN AFFAIRS CENTRAL COMMITTEE

The Central Committee was reconstituted to include Black representatives from member companies in various regions of the Republic. The Committee has continued to meet during the year to consider matters in the field of Black affairs relating to administration, legislation, in-service training and industrial relations, and to advise the Board of Management, Council and constituent Associations on items of principle relating thereto.

LEGISLATION

Bantu Labour Relations Regulation Act, No. 48 of 1953 (as amended by Act No. 70 of 1973)

During the 1977 Parliamentary session, a Bill was introduced to amend the legislation which, inter alia, would confer powers on Works/Co-ordinating

Works/Liaison/Co-ordinating Liaison Committees to negotiate binding agreements with employers at individual plant level concerning wages and other conditions of employment, irrespective of the operation of current industrial agreements. SEIFSA made representations to the Minister of Labour on certain areas of conflict with the Industrial Council system. The Bill was passed by Parliament and subsequently promulgated in terms of the Bantu Labour Relations Regulation Amendment Act No. 84 of 1977 which became effective from 1st September, 1977.

As this legislation falls within the terms of reference of the Commission of Inquiry into Labour Legislation appointed by the Government in July, 1977, appropriate submissions will be made by SEIFSA and its constituent Associations in consultation with the SEIFSA Board and Council.

SEIFSA's Non-European Affairs Central Committee is examining the practical application of the legislation prior to recommending the publication of guidelines for member companies for the effective operation of the Committee system.

MIGRATORY LABOUR

Progress has been monitored during the year on the implementation of certain recommendations contained in the report of the Government Departmental Committee of Enquiry on improvements to the migratory labour system. Certain interim changes are envisaged in the provision of more modern accommodation for migrant workers to provide them with the opportunity to be visited by their families.

BANTU AFFAIRS ADMINISTRATION BOARDS

Following recommendations by the SEIFSA Non-European Affairs Central Committee as endorsed by the SEIFSA Board, representations were made to the Deputy Minister for Bantu Affairs for more effective representation by SEIFSA on certain Boards in addition to the representation currently enjoyed. The Deputy Minister agreed to this request concerning the Boards for the East Rand, West Rand and Port Natal regions.

BANTU TAXATION

The South African Employers' Consultative Committee on Labour Affairs continues to monitor the anticipated report of the Government Departmental Committee which was appointed to review the present income tax system following recommendations to the Government on the elimination of regressive tax inequities inherent in the present system.

BANTU TRAINING

(i) **Co-ordinating Council**
SEIFSA continues to participate on the Council which co-ordinates and controls the various Public In-Service Training Centres as well as advising the Deputy Minister of Bantu Education on matters of policy and procedure relating thereto.

(ii) **In-Service Industrial Training Centres (Public Centres)**
SEIFSA continues to be represented on the Governing Bodies of the centres located at Chamdor (Krugersdorp), Sebokeng (Vereeniging), Apex (Benoni), Waltloo (Pretoria), Pinetown, Emthonjeni (Port Elizabeth) and Boithusong (Bloemfontein). Certain centres have notified their intention to impose levies on employers in their respective regions as provided for in the Bantu Employees' In-Service Training Act No. 86 of 1976.

(iii) **Private In-Company Training Schemes**
The Bantu Labour Unit has continued to advise member companies on the establishment and registration procedures for in-company training schemes to enable them to secure the special income tax concessions which accrue.

HOME OWNERSHIP SCHEMES FOR BLACKS IN URBAN RESIDENTIAL AREAS

SEIFSA has continued to monitor the provisions for home ownership schemes for Blacks in urban residential areas, particularly in the Vaal Triangle, West Rand and East Rand regions, and has advised member companies accordingly.

Liaison has been maintained on the progress of recommendations to Government by the Urban Foundation for the introduction of a more acceptable form of land tenure for home ownership than the present leasehold provisions, with a view to encouraging greater investment by financial institutions and thereby making a greater volume of loans available to the Black community.

PRIVATE SECTOR HELP IN THE DEVELOPMENT OF THE BANTU HOMELANDS

The Committee of Overall Co-ordination for Private Sector help in the Development of the Bantu Homelands, on which SEIFSA is represented, continued to meet and monitor the progress in the individual Homelands through liaison with the respective Homeland Economic Liaison/Advisory Committees on which the private sector has representation.

CHIEF BANTU AFFAIRS COMMISSIONER, WITWATERSRAND

Ongoing liaison has been established with the Commissioner in respect of various aspects of Black affairs in the Witwatersrand region and SEIFSA member firms have been notified of matters of interest through the medium of the SEIFSA Bulletin or by special circular letter if indicated, to enable them to process effective communication with their Black employees.

NATIONAL AFRICAN FEDERATED CHAMBER OF COMMERCE (NAFCOC)

SEIFSA has representation on the NAFCOC Education Sub-Committee which is concerned with the development and launching of training courses for Black entrepreneurs in urban residential areas. A pilot training scheme for the Vaal Triangle region has been in operation since July, 1977, and continues to receive support.

UNISA INSTITUTE OF LABOUR RELATIONS

Liaison has been maintained with the Institute concerning industrial relations in respect of Black employees. SEIFSA also participated at a symposium on "Focus on Labour Relations" featuring speakers from the Institute on selected subjects.

INSTITUTE FOR INDUSTRIAL RELATIONS

SEIFSA maintains liaison with the Institute through participation on its Executive Committee and Liaison/Advisory Sub-Committee, and has also been represented at seminars and other presentations concerning training in the field of industrial relations.

SUBSIDISATION OF TRANSPORT FOR NON-WHITES

An Inter-departmental Committee of Enquiry into the Subsidisation of transport for Non-White workers was established and SEIFSA made certain submissions in reply to a questionnaire prepared by the Committee for the purpose of rationalising the subsidisation of transport along more equitable and acceptable lines. The Committee's report is expected late in 1977 and SEIFSA will monitor progress.

NATAL CHAMBER OF INDUSTRIES LABOUR AFFAIRS COMMITTEE

SEIFSA has representation on the Labour Affairs Committee by invitation of the Natal Chamber of Industries and, in this way, maintains liaison on a variety of matters concerning Black affairs including, inter alia, industrial relations, industrial legislation, social benefit schemes, housing and transportation. The Committee includes Black representatives from companies in the Natal region and the senior SEIFSA Bantu Liaison Officer.

INCREASES IN HOUSE/SITE RENTALS

Proposals by various Bantu Affairs Administration Boards for substantial increases in house/site rentals in urban Black residential townships have been opposed by Black residents in some areas, notably Soweto, and SEIFSA is continuing to monitor the position through the appropriate authorities.

SUGAR MANUFACTURING AND REFINING EMPLOYERS' ASSOCIATION

The SEIFSA Bantu Labour Unit addressed representatives from the Association, by invitation, on the effective establishment and functioning of liaison committees and communication processes in the field of industrial relations.

CAPE CHAMBER OF INDUSTRIES

By invitation, the Bantu Labour Unit addressed representatives from SEIFSA member firms and those of the Cape Chamber of Industries on industrial relations vis-a-vis Black workers relative to guidelines on communication, legislation, labour relations and in-service training.

COMMISSION OF ENQUIRY INTO LEGISLATION AFFECTING THE UTILISATION OF MANPOWER (EXCLUDING THE LEGISLATION ADMINISTERED BY THE DEPARTMENTS OF LABOUR AND MINES)

Appropriate submissions are being framed for the above Commission on those matters having relevance to the employment of Black workers.

COMMUNICATIONS UNIT

COMMENCEMENT OF THE UNIT'S WORK

The SEIFSA Communications Unit was established in January, 1977.

SEIFSA INDUSTRIAL RELATIONS AND COMMUNICATIONS PROJECT COMMITTEE

The Project Committee, consisting of senior management representatives of member companies experienced in the Industrial Relations and training fields, was established to plan the operations and functions of the Communications Unit and to examine periodically the draft material developed for use by member companies.

AD HOC WORKING COMMITTEE: LIAISON COMMITTEE TRAINING

The Ad Hoc Working Committee was established to co-ordinate the development of Black Liaison Committee training modules.

MANAGEMENT TRAINING PROGRAMME IN THE FIELD OF INDUSTRIAL RELATIONS

Introductory presentations to senior management representatives of member companies were held on a regional basis at 11 venues throughout the Republic of South Africa. The presentations were attended by 489 delegates, representing 155 member companies.

Delegates were informed of Briefing Groups for the improvement of downward communication and the Liaison Committee training package available to member companies. An audio-visual programme illustrated the nature of the Industrial Relations training scheme.

EVALUATION OF THE INTRODUCTORY PRESENTATIONS TO SENIOR MANAGEMENT

Requests from 55 member companies had been received for the introduction of Briefing Groups and/or Liaison Committee training.

PILOT BRIEFING GROUPS

A pilot exercise in Briefing Groups was introduced at a member company in association with the Anglo American Corporation of South Africa.

LIAISON COMMITTEE ORIENTATION COURSES

Orientation courses for senior management, White supervisory management and Liaison Committee training instructors form part of the Liaison Committee training package offered to member companies.

INSTITUTE FOR INDUSTRIAL RELATIONS

Briefing Groups are introduced at member companies in association with the Institute for Industrial Relations.

PLANNING FOR EXPANSION OF SERVICES

Phase II of the Communications Unit Industrial Relations training programme is directed at shopfloor interaction and negotiation skills.

Training modules for use by member companies will be developed in:

Legislation for the Supervisor;
Human Relations at Work;
Motivating Employees;
Handling Conflict at Work;
Culture Appreciation and Industrial Literacy.

TECHNICAL DIVISION

TECHNICAL SCHEDULES FOR INDUSTRIAL AGREEMENTS

During the year a further eleven technical schedules for incorporation in the Main Industrial Agreement were negotiated and these will be published in a revised Consolidated Main Agreement, presently being prepared by the National Industrial Council.

In addition, a number of amendments to the technical schedules of House Agreements were also negotiated.

METRICATION

SEIFSA has been represented at meetings of the Metrication Advisory Board and the Industrial Metrication Group, which has latterly been reconstituted as a Working Group, combining with the former Commercial Metrication Group. Members of SEIFSA Associations made a major contribution to the briefing of a deputation from various organisations from the United States of America.

STANDARDISATION

South African Bureau of Standards

SEIFSA continued giving active support to the work of the Standards Industrial Liaison Committee during the past year, and all activities of the Bureau of Standards have been reviewed at its regular meetings.

Representations were made in particular regarding the scope of the Standards Amendment Act (Act No.100 of 1977).

SEIFSA representatives participate in the work of technical committees established to prepare new Standard Specifications and Codes of Practice and to revise existing ones.

The following table summarises developments during the year in regard to Specifications and Codes of Practice relevant to the metal and engineering industries:

41	New and revised Standard Specifications and Codes of Practice published
21	Amendments issued
47	Draft Specifications and Codes of Practice circulated for comment
23	Questionnaires on need for new projects circulated
20	New technical committees established.

Details of these were published in the SEIFSA Bulletin.

Pressure Vessels

With the support of widely representative groups of manufacturers, approved inspection authorities and users, as also of the Departments of Labour and of Mines, a Pressure Vessel Advisory Committee including SEIFSA representatives has been established by the Bureau of Standards with the aim of establishing common standards of inspection. The institution of a "national stamp" for pressure vessels is also under consideration.

South African I.S.O. and I.E.C. Committees

SEIFSA representatives participate in the work of many of these Committees. Details of documents received and publications available are published in the SEIFSA Bulletin.

Design Institute

Liaison with the Institute is maintained regularly, and there appears to be an increasing interest among SEIFSA members in this field.

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

Technical Services Department

Further "open days" for SEIFSA Members have been arranged to explain the services offered to industry by this Department in the areas of low cost automation, numerical controlled machining, optimum machining techniques and the training of apprentices.

National Building Research Institute

SEIFSA is represented on a Steering Committee dealing with environmental aspects in industry.

SEIFSA is also represented on a further Steering Committee on Solar Heating and Energy Conservation in Industry.

NATIONAL PRODUCTIVITY INSTITUTE

Liaison with the Institute is maintained and SEIFSA is represented on the Productivity Advisory Council.

POLLUTION

All aspects of pollution — air, water, noise and littering — continued to receive attention and SEIFSA has participated and co-operated with the various authorities dealing with these matters.

LEGISLATION

Attention has been given to technical matters arising from proposals for legislation affecting SEIFSA interests, including —

The Factories, Machinery and Building Work Act, 1941 (Proposals to amend Regulation C46 — Safety on Cranes).

The Electrical Wiremen's and Contractors' Act, 1939 (Proposed amending legislation)

National Building Regulations and Building Standards Bill, 1977

Proposals for national legislation on noise pollution control

Hazardous Substances Act, 1973 (Promulgation and Regulations)

Health Act, 1977

Measuring Units and National Measuring Standards Act, 1973 (Promulgation)

EDUCATION AND TRAINING DIVISION

SEIFSA TECHNOLOGICAL FUND

The increasing demand on the Fund for the establishment and promotion of schemes of education and training within the metal and engineering industries continues.

TECHNICIAN TRAINING

428 bursaries were awarded to students taking the courses for the National Diploma for Technicians. The distribution of bursaries in the 16 approved courses at colleges for advanced technical education was as follows:

Cape Town	56	Port Elizabeth	5
Durban	57	Vaal Triangle	63
Pretoria	74	Witwatersrand	164
M. L. Sultan	9		

TRAINING OF ADMINISTRATIVE PERSONNEL

70 bursaries were awarded to selected students who enrolled for the National Diploma in Cost Accounting, National Diploma in Electronic Data Processing and Systems Analysis and the National Certificate in Supervisory Management. The distribution of bursaries at the colleges for advanced technical education was as follows:—

Natal	8	Witwatersrand	56
M. L. Sultan	4	Pretoria	2

UNIVERSITY FIRST DEGREE BURSARIES

35 awards were made to students registered in approved courses at universities:—

Cape Town	6	Randse Afrikaanse	3
Durban	3	Witwatersrand	16
Port Elizabeth	2	Rhodes	1
Pretoria	4		

SEIFSA POST-GRADUATE OVERSEAS RESEARCH SCHOLARSHIP

Under this scheme one award was made for the 1976/77 academic year. This award was for a M.Sc. degree in electronic equipment design.

Two awards were made for the 1977/78 academic year. One award was for doctorate research into the effect of welding process, filler material and post-weld treatment on the toughness, ductility and corrosion resistance of the 18 Cr 2 Mo ferritic stainless steel.

The second award was for the study of courses and methods used in the industrial training of undergraduates and post-graduates in engineering and the study of design teaching methods for undergraduates.

BURSARIES

To date total bursaries awarded amount to R1 543 135.

WELDING TECHNOLOGY

Eight bursaries were awarded to persons enrolled for the part-time courses in Welding Technology introduced at various colleges for advanced technical education.

COMMITTEE OF INVESTIGATION INTO THE TRAINING AND RE-TRAINING REQUIREMENTS OF WHITES, COLOUREDS AND ASIATICS

The recommendations of the above Committee, on which the Office is represented, were considered and accepted by the Cabinet Committee for Economic Policy.

The Committee recommended, inter alia, the extension of the tax concessions of 200% rebate in White Areas and 225% in economic development areas to industries which train or re-train Whites, Coloureds

and Asiatics, and the Office gave estimates of such training and re-training costs in the metal and engineering industries.

The extension of similar concessions to include the training costs of apprentices is being investigated by the Office.

ADVISORY COMMITTEES

SEIFSA is represented on Advisory Committees at the various colleges for advanced technical education.

REPRESENTATION ON THE COUNCILS OF COLLEGES FOR ADVANCED TECHNICAL EDUCATION, TECHNICAL COLLEGES AND TECHNICAL HIGH SCHOOLS

SEIFSA is also represented on the Councils of colleges for advanced technical education, technical colleges and technical high schools.

TRAINING OF APPRENTICES — NATIONAL APPRENTICESHIP BOARD.

SEIFSA continues to be represented on the Board which deals with matters of national policy relating to apprentices.

NATIONAL APPRENTICESHIP COMMITTEE FOR THE METAL INDUSTRY

SEIFSA is represented on the above Committee and Regional Committees thereof.

APPRENTICESHIP STATISTICS

The number of new apprenticeship registrations and current contracts for the years 1975/1976 relating to the National Apprenticeship Committee for the Metal Industry is as follows:—

Apprenticeship New Registrations		Apprenticeship Current Contracts	
1975	1976	1975	1976
3662	3657	11059	11557

TRAINING — GENERAL

During the year the National Apprenticeship Committee for the Metal Industry revised the conditions of apprenticeship.

The Committee also dealt with the following:—

(a) Revised schedules of apprenticeship training in the 43 trades in the metal and engineering industries.

(b) Shortening of the period of apprenticeship of all designated trades to three years, except two which remain as five year basic trades.

(c) Amendments to the educational qualifications schedule and payment of class or course and examination fees clause in the Conditions of Apprenticeship.

(d) The establishment of a separate Apprenticeship sub-Committee of the National Apprenticeship Committee for the Metal Industry in Northern Natal.

The wage of the fifth year apprentice was increased from R1,83 to R1,90 per hour from 1st September, 1977, and adjustments to the wages of apprentices in their first to fourth years were proposed.

Courses pertaining to the National Certificates for Industrial Training Officers and in Supervisory Management are being re-appraised.

Lecture guides for the Metallurgical Process Operators' courses in Industrial Orientation at N2 and N3 levels, Ferro Metal Rolling and Shaping Process at N2 level, Coke and By-product Process at N2 and N3 levels, Steel Production and Casting Process at N2 and N3 levels and Iron Production and Casting Process at N2 level were compiled.

Guidelines for the practical training of technician students have been compiled and are distributed to trainee students and interested parties.

The question of practical vocationally orientated courses offered at provincial high schools was investigated and referred to the Minister of National Education for attention. The Secretary of National Education has since clarified the position regarding admission to tertiary courses of study of persons in possession of a Std. 10 certificate (Practical).

An industrial training scheme for graduates, undergraduates, technicians and apprentices in possession of certain technical qualifications, similar to that in operation at the University of Cambridge was investigated. Whilst the structuring of such a unit has not been proceeded with, a new approach on a vacation basis is being investigated.

CENTRALISED TRAINING FACILITIES FOR APPRENTICES

The question of the possible establishment of centralised training facilities for apprentices in the metal and engineering industries was investigated, but in view of the cost and other factors, the scheme was not proceeded with. Certain firms with training schools offered to accept apprentices from firms without such facilities subject to the necessary arrangements being made on a domestic basis.

TECHNIQUES AND USE OF AUDIO-VISUAL AIDS IN TRAINING

A seminar on the techniques and use of audio-visual aids in training was given by Dr. J. Cowan of the Heriot Watt University of Edinburgh.

FEDERATION OF SOCIETIES OF PROFESSIONAL ENGINEERS — POSSIBLE EXTENSION OF THE PROFESSIONAL ENGINEERS' ACT TO

PERMIT REGISTRATION OF OTHER CADRES OF ENGINEERS

SEIFSA participated in discussions regarding the pending legislation to establish Boards of Control for those persons who performed work related to that reserved for professional engineers, with particular reference to engineers whose qualifications were not recognised by the South African Council for Professional Engineers, holders of Government Certificates of Competency, engineering scientists and engineering technicians.

APPRENTICESHIP ACHIEVEMENT AWARD

Achievement awards of R100 each and miniature trophies were awarded to those apprentices employed in the metal and engineering industries who obtained the highest marks in the National Technical Certificate examination at N1, N2 or N3 levels.

RECRUITMENT FOR THE INDUSTRIES

The recruitment campaign to attract artisans and draughtsmen from overseas to meet the shortage of skilled personnel in those categories of labour in the metal and engineering industries continues on a reduced level. Recruits are being directed to companies indicating vacancies.

Over 2 100 written enquiries for information regarding employment and careers in the metal and engineering industries were received during the course of the year. The majority of enquiries concerned apprenticeship and technician courses.

Career seminars and talks were given to over 6 200 pupils, parents, teachers and other persons at various high schools, technical high schools and universities to acquaint them with career opportunities in the metal and engineering industries.

Visits were also arranged for pupils to member firms to acquaint them with actual working conditions in the industries.

The SEIFSA recruitment film "Shaping the Future" was screened by various organisations in addition to those to whom talks were given by the Office. The SEIFSA booklet "Careers Guide to the Metal and Engineering Industries" was also distributed at the talks given by the Office.

METAL AND ENGINEERING INDUSTRIES EDUCATION AND TRAINING FUND

Training grants continue to be paid by the Fund to employers. Grants totalling R4 513 002 were paid to employers in respect of employees obtaining specified qualifications during 1975/76.

The grant provisions of the Fund were extended to cover persons completing contracts in terms of the Journeyman Recognition Scheme with retrospective effect from 29th September, 1975.

To date total grants paid to employers from the inception of the Fund amount to R21 million.

Proposals to extend the Fund to provide for grants, subsidies and financial assistance on a wider scale for the training and/or re-training and/or education of employees over the full spectrum of the industries were considered but deferred due to the economic position facing the industries at present.

Grants payable by the Fund in respect of apprentices qualifying as journeymen were increased with retrospective effect from 21st September, 1975 as follows:

When an apprentice completes his indentures:

(i) By effluxion of time ..... R2 400 or

(ii) By passing the trade test R3 200

ECONOMICS DIVISION

ECONOMIC ADVISORY COUNCIL

SEIFSA is represented on the Prime Minister's Economic Advisory Council. The SEIFSA Director also attends meetings of the Council in an individual capacity.

The economic recession throughout the year deepened whereas on the other hand South Africa's trade balance with the rest of the world improved.

The gold price firmly withstood the effects of the International Monetary Fund's gold auctions and the dilemma of economic policy was how to secure a lower rate of inflation and higher economic rate of growth without further lowering the level of the foreign exchange reserves. The Council was also much concerned with the rising tide of unemployment. The Standing and Ad Hoc sub-Committees of the Council continued their studies and investigations. An Ad Hoc sub-Committee studied and reported on the concepts of the biennial Economic Development Programmes.

Under the aegis of the Council a Study Group was formed to examine export incentives and another to examine industrialisation strategy, the members of both Groups being nominated by the Minister of Economic Affairs.

SEIFSA ECONOMIC AFFAIRS COMMITTEE

The Committee met regularly throughout the year to review business conditions in the metal and engineering sectors of industry and to report these conditions to the SEIFSA membership and to the Economic Advisory Council.

For a second successive year a large number of Bills were introduced in the course of the Parliamentary session. Those bearing directly on the metal and engineering industries as such or calculated to affect SEIFSA sector operations were studied and, when necessary, comment or representations were submitted.

Specialist sub-Committees concerned respectively with Export Promotion, Taxation, the Companies Act, Transportation and Accounting Practices con-

ENGINEERS' AND FOUNDERS' ASSOCIATION:
Chairman: R. T. Shaw
Vice-Chairman: I. F. Kerr
Executive Committee: C. Edwards, B. Buckley, W. I. Campbell-Pitt, P. Krenkel, B. H. Fell, R. M. F. Seawright, R. J. Crawford-Brunt.
Co-Opted: L. Kitchener, B. Carney, W. Jacobs, W. A. Beckley.

FERRO ALLOY PRODUCERS' ASSOCIATION:
Chairman: P. E. Streicher, J. H. Vorster (Alternate)
Vice-Chairman: J. C. Hall, W. D. Winship (Alternate)
Executive Committee: E. R. Baggott, J. G. Maree (Alternate), W. G. Beattie, D. M. Legg (Alternate), Dr. P. W. Clark, Cmdre. G. H. Peters (Alternate), M. Harris, J. L. Carter (Alternate), T. E. Knight, B.A.M. Denton (Alternate), L.A. Kok, T. J. Callaghan (Alternate), A. L. Melvill, R. R. Ellwood (Alternate), J. M. Meyer, F. M. Dunham (Alternate), M. P. Wessels, B. J. Nolte (Alternate), R. W. Zille, K. Eborall (Alternate).

FIRE PROTECTION INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: J. A. Flinn
Vice-Chairman: J. Foley
Executive Committee: J. Bowen, C. Edwards, R. W. Miller.

GAS CLEANING EQUIPMENT SUPPLIERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: K. J. Bubenzer
Vice-Chairman: J. Ashton
Executive Committee: J.W. Bellew, K. Herb, M.H. Luscombe, P.J. Vermunt.

GATE AND FENCE MANUFACTURERS' ASSOCIATION OF THE TRANSVAAL:
Chairman: C. M. Herr
Vice-Chairman: A. J. Gunning
Executive Committee: L. S. Klotz, S. Rogoff, G. E. Trent.
Co-Opted: V. Reece, E. R. Samworth.

HEAVY ENGINEERING MANUFACTURERS' ASSOCIATION:
Chairman: A. L. Snell
Vice-Chairman: K. Jackson
Executive Committee: R. M. F. Seawright, K. W. Meldil-Johnson, K. P. O. Frykberg, T. E. Holmes, B. D. Quigley, F. Broderick, W. Harrison.

HYDRAULICS AND PNEUMATICS ASSOCIATION:
Chairman: R. N. Hancox
Vice-Chairman: H. Heiss
Executive Committee: N. Hewitt, B. Shea, J. L. Gill, I. Joss.

IRON AND STEEL PRODUCERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: J. P. Coetzee
Vice-Chairman: L. Boyd
Executive Committee: H. C. H. Hutten, Dr. J. P. Kearney, Dr. K. Schermer.
Co-Opted Members: W. G. Boustred, H. R. Curnick, L. C. J. de Villiers, J. C. de Waal, E. H. Dreyer, A. L. Evans, H. S. Gray, N. J. Grobler, G. E. Holtshausen, E. Jackson, K. D. Kynoch, T. E. Knight, C. J. M. Prinsloo, J. C. Steenkamp, G. M. Stott, R. K. Tait, A. N. Turner, J. H. Vorster.

LIFT ENGINEERING ASSOCIATION OF SOUTH AFRICA:
Chairman: W. D. Patterson
Vice-Chairman: B. Cooke
Executive Committee: J. L. Ligetti, P. F. Peeters, S. F. White.

LIGHT ENGINEERING INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: J. C. McCormick
Vice-Chairman: I. F. Wentzel
Executive Committee: J. P. Newman, C. J. Meter, D. MacKintosh.
Co-Opted: A. van Boven (Jnr.), K. Gibson.

Representing Industrial Divisions:
Metal Window and Door Manufacturing Division:
J. J. G. Grobler
Light Stampings and Forgings Division:
J. P. Newman
Wire Products Division:
T. J. Wearne
Hardware Manufacturing Division:
Vacant
Chain Manufacturing Division:
H. M. E. Lentz
Light Fabricating Division:
C. J. Meter
Lock and Latch Manufacturing Division:
Vacant
Die Castings and Extrusions Division:
Vacant

MACHINE ENGRAVERS' ASSOCIATION:
Chairman: H. Rothschild
Vice-Chairman: E. Hubner
Executive Committee: J. C. Maizey, H. Maurer, M. J. Johnston, K. F. Koll, N. Hirschson.

MATERIALS HANDLING AND CONSTRUCTION PLANT ASSOCIATION OF SOUTH AFRICA:
Chairman: R. Rose
Vice-Chairman: P. L. Malan
Executive Committee: G. L. Hall, J. A. Anderson, J. Stirling, J. Turner, M. B. Cramb, D. R. Newton.
Co-Opted: R. Mason, G. W. Bethwaite.
Ex-Officio: P. L. Kearney.

NATAL ENGINEERING INDUSTRIES ASSOCIATION:
Chairman: K. J. Crawford
Vice-Chairman: R. C. Throssell
Co-Opted Member: W. L. Morrison

Representing Industrial Divisions:
Structural, Marine & General Engineering Division:
I. Tudhope, E. V. Mackie, C. R. Brass, H. Oliver.
Sheet Metal Engineering Division:
L. J. Emanuel, F. Howes, G. W. Turner.
Foundry Group Division:
E. C. de Jager, F. V. Rice, M. G. Thomson, L. J. Emanuel.
Light Engineering Division:
J. Walton
Electrical Engineering Division:
G. A. Ewer
Non-Ferrous Division:
K. J. Crawford, B. Lazarus.
Panelboard Manufacturers' Division:
N. Larmont
Plastics Division:
E. G. Simpkins, C. D. Siepman.
Reinforced Concrete Engineering Division:
R. E. Stuart-Hill

NON-FERROUS METAL INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: A.I. Gruss
Vice-Chairman: J.M. Hess
Treasurer: D.A.H. Davies
Executive Committee: E.D. Wahlaus
G. Goslar, B. Lazarus.

PLASTICS MANUFACTURERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: P. F. S. King
Vice-Chairman: D. A. Jacobs
Executive Committee: D. J. Jacobs, S. K. Kopp, A. H. Hofmeyr, R. W. Maier, T. W. W. Scarborough.
Co-Opted: K. Smith, J. Rubenstein, R. G. Harrison, C. B. Davis, P. S. Kay,

PLUMBERS AND ENGINEERS BRASSWARE MANUFACTURERS' ASSOCIATION:
Chairman: P. F. W. Schultz
Vice-Chairman: R. M. Burle

PORT ELIZABETH ENGINEERS' ASSOCIATION:
Chairman: F. Pilgrim
Vice-Chairman: C. F. Warden

PRECISION MANUFACTURING ENGINEERS' ASSOCIATION:
Chairman: R. M. F. Seawright
Vice-Chairman: W. Makepeace
Executive Committee: K. S. Rice, L. J. Sawyer, R. J. Hosking, B. H. Fell, L. van Rensburg.

PRESSURE VESSEL MANUFACTURERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: A. H. Goodwin
Vice-Chairman: C. S. Fiander
Executive Committee: A. N. Berman, H. J. Howarth, L. R. Harris, P. Lombardi, J. A. Moody, M. J. Rawlins, B. Clegg, P. R. Atkins.

RADIO, APPLIANCE AND TELEVISION ASSOCIATION OF SOUTH AFRICA:
Chairman: J. J. Perkins
Vice-Chairman: H. F. Jacobs
Executive Committee: S. J. Archibald, G. W. G. Brodie, L. Duncan, A. Fuchs, A. H. Giddy, G. A. Gullifer, S. Marais, W.D. Mummery, M. Saldsman.
Co-Opted: C. R. Battrick, E. S. Patz, I. W. Penfold, I. H. Snell.

SHEET METAL INDUSTRIES ASSOCIATION OF SOUTH AFRICA:
Chairman: S. Per
Vice-Chairman: S. Hendler
Executive Committee: J. P. Shnaier, L. E. Rose, H. S. Ostroff, N. Smith, D. Krost.
Co-Opted: B. Blecher, D. C. O'Brien, S. Gerber, L. M. Hare.

S.A. AGRICULTURAL AND IRRIGATION MACHINERY MANUFACTURERS' ASSOCIATION:
Chairman: R. Mason
Vice-Chairman: W. D. Thompson
Executive Committee: W. J. Beukes, L. Lee, C. J. Luther.
Co-Opted: A. McGugan, D. A. J. Foord, G. L. Laubsher, W. B. Trehaeven.

SOUTH AFRICAN AIR CONDITIONING EQUIPMENT MANUFACTURERS' ASSOCIATION:
Chairman: D. J. Ham
Vice-Chairman: J. I. Hancock
Executive Committee: D. M. Waldron, T. Wood-Collier.
Co-Opted: P. R. Clayton, D. Bennett.

SOUTH AFRICAN ASSOCIATION OF SHIPBUILDERS AND REPAIRERS:
Chairman: T. H. Jackson
Vice-Chairman: R. C. Throssell

S.A. BURGLAR ALARM SYSTEMS ASSOCIATION:
Chairman: J. P. Beard
Vice-Chairman: R. M. Horsley
Executive Committee: K. MacCash, A. Primikirios, M. L. Powell.

S.A. ELECTROPLATING INDUSTRIES ASSOCIATION:
Chairman: P. L. Schalkwyk
Vice-Chairman: D. M. Nel
Executive Committee: C. H. Lauder, K. W. Newdigate, C. D. Viljoen.
Branch Representatives: B. Wilson, L. Sebba, P. Pelser.
Co-Opted: I. H. Lauder, H. Lipworth, T. Bonacina.

SOUTH AFRICAN FABRIC REINFORCEMENT ASSOCIATION:
Chairman: P. F. Wintour
Vice-Chairman: G. V. Morshead
Executive Committee: D. B. Greve, G. Mandelzweig, J. C. Nettleton, C. P. Sayce.

SOUTH AFRICAN FASTENERS MANUFACTURERS' ASSOCIATION:
Chairman: C. E. S. Place
Vice-Chairman: G. Pearson
Executive Committee: J.B. Gray, A.B. Ross, E. Simon, , D.R. Kenning.
Co-Opted: H. van Jaarsveld, W. Bergh, R. A. Kirkham.

SOUTH AFRICAN HOT DIP GALVANISERS' ASSOCIATION:
Chairman: A. Lioneilo
Vice-Chairman: W. G. S. Barnett

SOUTH AFRICAN INDUSTRIAL REFRIGERATION AND AIR CONDITIONING CONTRACTORS' ASSOCIATION:
Chairman: M. Vergunst
Vice-Chairman: J. A. O. Howard
Executive Committee: R. D. Baron, A. J. Crompton, E. G. Ellard, T. W. R. Croft, C. C. Elston, M. Streeter, J. A. O. Howard.
Co-Opted: A. R. Harrison, L. S. King, H. Schuurmans, K. H. Klostermann.

SOUTH AFRICAN LIGHTING FITTINGS ASSOCIATION:
Chairman: D. N. Lee
Vice-Chairman: Vacant
Executive Committee: C. Rietbroek, G. G. Lavery, T. Gilliland, M. Robinowitz, A. Frey.
Co-Opted: B. S. Nel
Cape Branch Representative: T. B. Partridge

SOUTH AFRICAN MACHINE TOOL MANUFACTURERS' ASSOCIATION:
Chairman: J. Coningsby
Vice-Chairman: H. W. Holsteyn
Executive Committee: A. J. Meuller, E. Faccio, S. Torch.
Co-Opted: B. W. Rebstein, J. D. R. Hugo, H. Swift.

SOUTH AFRICAN PRODUCTION FOUNDERS' ASSOCIATION:
Chairman: J. E. D. Greenhorn
Vice-Chairman: H. A. Godwin
Executive Committee: H. du Preez, D. J. van Zyl, J. Davies, A. Ferreira, P. Leach, A. R. Cluett.
Co-Opted: T. Osler, J. H. Proffitt, G. Willis.

SOUTH AFRICAN PUMP MANUFACTURERS' ASSOCIATION:
Chairman: H. C. Peake
Vice-Chairman: W. J. Collins

SOUTH AFRICAN RADIO COMMON CARRIER ASSOCIATION:
Chairman: R. L. Price
Vice-Chairman: W. E. Mole
Executive Committee: I. D. de Lange, D. Hammick, A. Pugh.

SOUTH AFRICAN RADIO MANUFACTURERS' ASSOCIATION:
Chairman: C. Baskind
Vice-Chairman: B. Slome
Executive Committee: W. Reid, P. Groenenboom, B. Tobiansky

SOUTH AFRICAN REINFORCED CONCRETE ENGINEERS' ASSOCIATION:
Chairman: C. V. Campbell
Vice-Chairman: P. N. Ferguson
Executive Committee: P. Gillis, P. Hill, R. E. Stuart-Hill, J. E. Sugden.

SOUTH AFRICAN TUBE MAKERS' ASSOCIATION:
Chairman: M. Lipa
Vice-Chairman: Vacant
Executive Committee: L. S. Klotz
Co-Opted: A. V. Weinerlein, D. Braddock.

SOUTH AFRICAN VALVE MANUFACTURERS' ASSOCIATION:
Chairman: H. J. H. Stehr
Vice-Chairman: H. du Preez

S.A. WIRE AND WIRE ROPE MANUFACTURERS' ASSOCIATION:
Chairman: B. G. A. Topper
Vice-Chairman: W. J. Beukes

SOUTH AFRICAN WROUGHT NON-FERROUS METAL MANUFACTURERS' ASSOCIATION:
Chairman: N. G. Short
Vice-Chairman: O. E. Krohn
Executive Committee: L. Z. Ospovat, S. F. Malan, J. M. Hess.
Co-Opted: W. J. Beukes, D. A. H. Davies.

SOUTHERN AFRICAN WATER AND SEWAGE PLANT SUPPLIERS' ASSOCIATION:
Chairman: P. L. Evans
Vice-Chairman: A. C. Lamouche
Executive Committee: J. W. C. Joughin, G. L. Bruyninckx, W. V. Enslin, A. R. Langlois, I. R. M. Greig.

STEEL KITCHEN FURNITURE MANUFACTURERS' ASSOCIATION:
Chairman: J. Chaskelson
Vice-Chairman: M. Goldman
Executive Committee: L. Bloch, C. Krost, E. W. Ebner.

TELEVISION AERIAL INSTALLERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: M. Ullman
Vice-Chairman: O. Friend
Executive Committee: E. Durkin, A. M. Epstein, W. D. Mummery, R. B. Hartog, K. Fritzgerald, I. Niezen.
Co-Opted: G. Kuijpers, A. S. Mocsa.

TELEVISION ANTENNA MANUFACTURERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: H. Marshall
Vice-Chairman: H. J. Konrad
Executive Committee: J. Chodos, C. R. Rowley. L. Ramsey
Co-Opted: B. A. Grant

TELEVISION MANUFACTURERS' ASSOCIATION OF SOUTH AFRICA:
Chairman: H. Rubin
Vice-Chairman: W. A. M. Clewlow
Executive Committee: B. Slome, W. Reid, O. von G. Scholtz, P. Groenenboom.

TRANSVAAL AND O.F.S. FOUNDRY ASSOCIATION:
Chairman: R. A. Boustred
Vice-Chairman: R. J. Crawford-Brunt
Executive Committee: R. A. Fox, W. P. Brown, N. D. Altenkirk, I. F. Kerr, H. D. Vollmer, W. J. Beukes.
Co-Opted: W. A. Hoadley, D. A. J. Foord, E. C. Barber.

STATISTICS

(Released by SEIFSA Statistical Section)

1. SOUTH AFRICA'S IRON AND STEEL AND FERRO ALLOYS' OUTPUT

(Metric Tons)

Year	Iron (Liquid and Pig)	Ferro Alloys and Spiegel Iron
1939	296 300	3 900
1944	463 600	8 200
1949	695 300	13 200
1954	1 171 000	25 900
1959	1 703 100	104 400
1960	1 820 800	172 400
1961	2 133 800	196 600
1962	2 227 900	182 300
1963	2 228 800	209 700
1964	2 656 400	230 300
1965	3 271 200	331 700
1966	3 421 900	336 000
1967	3 420 200	358 300
1968	3 775 100	349 500
1969	3 930 700	424 000
1970	3 929 500	429 200
1971	4 009 700	447 800
1972	4 409 100	490 200
1973	4 329 500	555 800
1974	4 620 500	636 200
1975	5 179 900	747 600
1976	5 795 200	823 100

Year	Open Hearth, Duplex and Oxygen Blown Steel Ingots	Electric Steel Ingots (1)	Steel Ingots: Total
1939	367 800	—	—
1944	483 500	—	—
1949	631 500	—	—
1954	1 264 800	112 000	1 376 800
1959	1 617 300	220 800	1 838 100
1960	1 783 400	281 400	2 064 800
1961	2 146 500	282 500	2 429 000
1962	2 270 100	308 100	2 578 200
1963	2 368 700	382 200	2 750 900
1964	2 589 800	412 000	3 001 800
1965	2 651 600	478 000	3 129 600
1966	2 694 800	503 300	3 198 100
1967	3 034 200	568 000	3 602 200
1968	3 308 300	623 600	3 931 900
1969	3 440 800	976 100	4 416 900
1970	3 332 000	1 176 700	4 508 700
1971	3 181 700	1 554 100	4 735 800
1972	3 317 400	1 842 600	5 160 000
1973	3 493 700	1 946 900	5 440 600
1974	3 452 700	2 173 100	5 625 800
1975	3 845 000	2 522 300	6 367 300
1976	3 859 700	3 066 400	6 926 100

(1) Including continuously cast steel billets.

2. SOUTH AFRICAN FOUNDRY PRODUCTION

(Sales tonnage in metric tons)

Year	Steel Castings
1966	101 600
1967	103 500
1968	89 000
1969	89 100
1970	110 400
1971	121 000
1972	120 900
1973	127 500
1974	135 900
1975	142 400
1976	158 000

Year	Grey and White Iron Castings*	Malleable Iron Castings	Ductile (S.G.) Iron Castings	Iron Castings: Total
1966	186 000	21 100	9 300	216 400
1967	194 600	21 900	11 900	228 400
1968	192 500	25 300	11 500	229 300
1969	201 000	30 300	11 600	242 900
1970	208 200	32 200	12 300	252 700
1971	227 500	38 900	13 000	279 400
1972	211 900	32 300	11 600	255 800
1973	226 600	38 000	13 900	278 500
1974	256 900	41 100	17 500	315 500
1975	293 100	38 200	17 100	348 400
1976	347 300	30 000	13 700	391 000

*Includes meehanite and other special iron castings.
Excludes ingot moulds produced in steelworks for own use.

Year	Copper and Copper Base Alloy Castings	Aluminium and Aluminium Base Alloy Castings	Other Non-Ferrous Metal Castings	Non-Ferrous Metal Castings: Total
1966	7 460	3 150	1 600	12 210
1967	7 970	3 480	1 880	13 330
1968	7 710	3 860	2 190	13 760
1969	7 990	4 340	2 690	15 020
1970	7 770	4 480	2 680	14 930
1971	7 710	4 390	3 180	15 280
1972	8 160	4 450	3 140	15 750
1973	8 630	3 960	3 030	15 620
1974	9 160	5 530	2 890	17 580
1975	7 840	4 970	2 280	15 090
1976	15 260	5 630	2 660	23 550

3. COMPOSITION OF HOURLY PAID LABOUR FORCE IN THE METAL INDUSTRIES GROUP

	PERCENTAGE DISTRIBUTION											
CLASS	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Artisans	13	13	13	14	13	13	13	12	12	12	13	12
Operators, etc.	15	15	14	14	13	13	13	13	12	12	14	15
Semi-skilled	23	22	23	21	24	24	24	26	29	29	29	30
Labourers	49	50	50	51	50	50	50	49	47	47	44	43
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

4. INDEX OF STATUTORY LABOUR COST IN THE METAL AND ENGINEERING INDUSTRIES

Base: July, 1952 = 1 000

Month	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
January	1713	1742	1742	1952	1952	2291	2291	2653	2967	3636	4107	4759
February	1736	1742	1809†	1952	1952	2291	2291	2653	2967	3636	4107	4770
March	1742	1742	1976†	1952	1952	2291	2291	2672	2977	3443	4107	4770
April	1742	1742	1973†	1952	1952	2291	2291	2750	2997	3646	4107	4770
May	1742	1742	1941	1952	1952	2291	2300	2750	2997	3646	4107	4770
June	1742	1742	1941	1952	1952	2291	2300	2750	2997	4107	4107	4770
July	1742	1742	1947	1952	1952	2291	2300	2750	2997	4107	4682	4770
August	1742	1742	1952	1952	1966	2291	2300	2750	3409	4107	4699	4770
September	1742	1742	1952	1952	2237	2291	2300	2750	3636	4107	4714	4993
October	1742	1742	1952	1952	2291	2291	2300	2750	3636	4107	4714	
November	1742	1742	1952	1952	2291	2291	2300	2967	3636	4107	4714	
December	1742	1742	1952	1952	2291	2291	2653	2967	3636	4107	4723	
Average	1739	1742	1924	1952	2062	2291	2326	2764	3238	3896	4407	

NOTES — Index of prescribed legal minima of wage rates, contributions to industry funds, etc., in respect of hourly rated employees falling under the Main Industrial Agreement.

† Including lump sum payment. Excluding the lump sum the following indices apply:
February and March — 1742, April — 1762.

5. STEEL PRICE INDEX

Base: July, 1952 = 1 000

Month	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
January	1058	1057	1062	1055	1059	1199	1200	1329	1502	2111	2469	3098
February	1058	1057	1062	1055	1059	1199	1200	1329	1502	2111	2469	3098
March	1058	1057	1062	1055	1059	1199	1200	1329	1502	2111	2469	3098
April	1058	1057	1064	1052	1059	1199	1204	1330	1510	2111	2467	3098
May	1058	1057	1064	1052	1059	1199	1204	1495	1510	2111	2837	3098
June	1058	1057	1059	1052	1059	1199	1327	1495	1915	2451	2837	3098
July	1057	1060	1059	1052	1180	1198	1327	1495	1915	2451	2840	3101
August	1057	1060	1059	1052	1180	1198	1327	1495	1915	2451	2840	3101
September	1057	1060	1059	1052	1199	1198	1327	1495	1915	2451	2840	3101
October	1057	1060	1059	1053	1199	1200	1329	1498	1915	2449	2840	
November	1057	1060	1059	1053	1199	1200	1329	1498	1923	2449	2840	
December	1057	1060	1059	1053	1199	1200	1329	1498	1923	2469	3098	
Average	1058	1059	1061	1053	1126	1199	1275	1441	1746	2311	2737	

NOTE — Price index of locally produced commercial steel products (all types) as calculated by ISCOR.

6. QUARTERLY INDEX FIGURES OF ACTUAL LABOUR COST

Base: July, 1963 = 100

Month	Hourly paid Employees: Total	Month	Hourly paid Employees: Total
1972: February	155,2	1975: February	246,4
May	156,1	May	254,5
August	156,6	August	280,4
November	162,3	November	281,7
1973: February	177,1	1976: February	287,9
May	185,4	May	290,7
August	186,8	August	322,4
November	193,7	November	332,7
1974: February	203,0	1977: February	337,5
May	207,9	May	337,3
August	235,6	August	337,8
November	245,6		

NOTE — Index of total labour cost based on actual wage rates paid for ordinary hours of work, cost of holiday pay bonus, and employers' contributions to social security funds.

7. QUARTERLY INDEX FIGURES OF ACTUAL HOURLY WAGE RATES PAID

Base: July, 1963 = 100

Month	Hourly paid Employees: Total	Month	Hourly paid Employees: Total
1972: February	149,0	1975: February	230,6
May	149,3	May	238,3
August	149,9	August	259,6
November	155,7	November	261,2
1973: February	167,0	1976: February	265,0
May	174,8	May	267,9
August	176,2	August	298,6
November	183,5	November	308,7
1974: February	192,0	1977: February	311,3
May	197,3	May	311,2
August	219,6	August	311,9
November	229,7		

NOTE — Index of actual wage rates paid for ordinary hours of work.

8. INDEX OF PLANT AND MACHINERY COST, BEFORE INSTALLATION

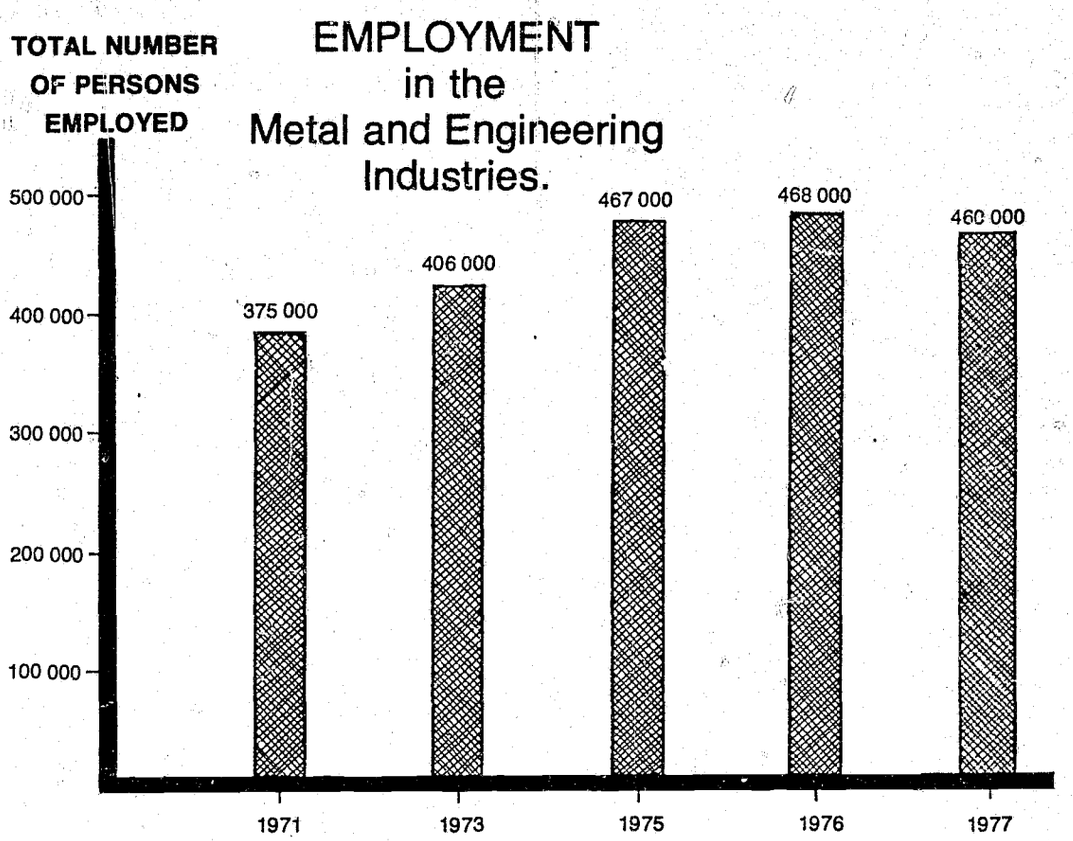
Base: January 1974 = 100

Year and Month	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1974	100,0	102,8	102,8	102,8	106,7	107,9	109,1	114,5	114,7	114,7	119,5	119,5
1975	120,5	125,0	125,0	125,0	128,8	128,8	132,3	137,7	137,7	142,2	147,4	147,4
1976	147,4	152,6	152,6	153,6	156,5	156,5	156,5	161,4	161,4	161,4	163,3	164,1
1977	164,1	167,0	167,0	168,4	172,7	172,7	172,7	174,4	174,4			

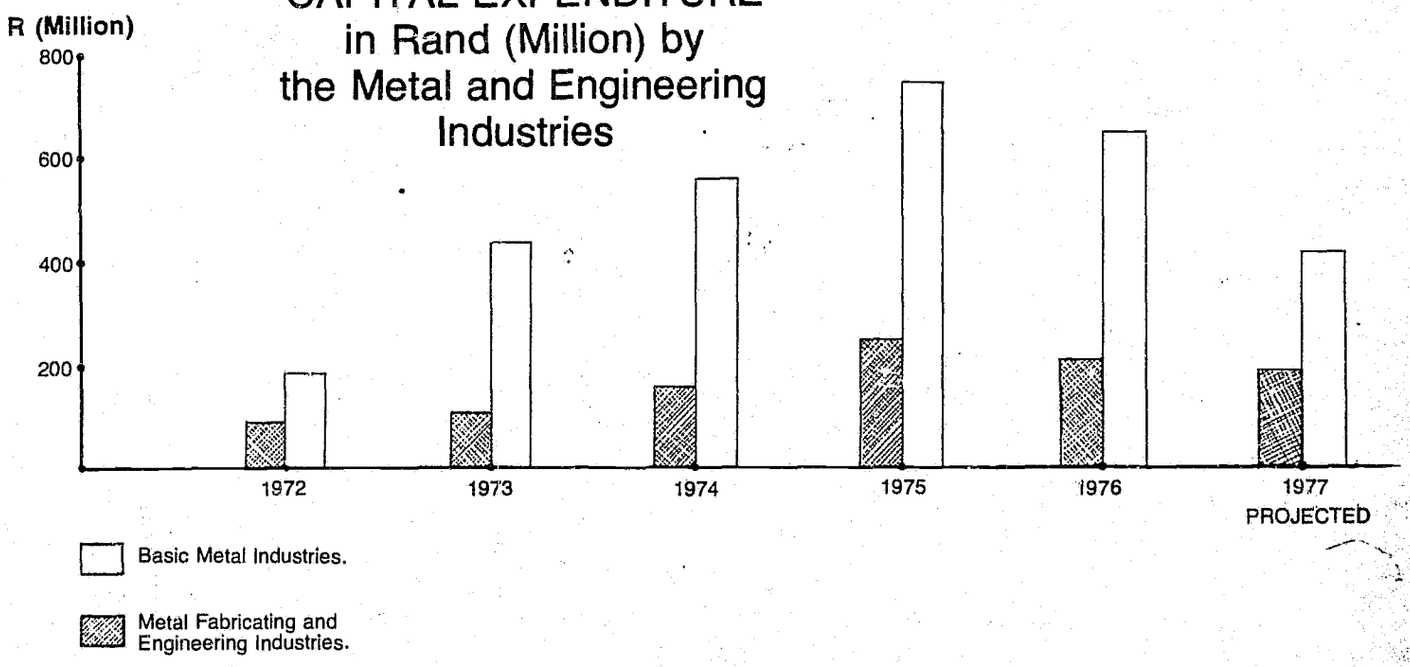
9. ANNUAL PERCENTAGE PRICE CHANGE OF PRINCIPAL INPUTS

	1973	1974	1975	1976	First Half 1977
Rolled Steel	+12,7	+28,4	+28,4	+15,0	nil
Steel Scrap	+ 5,1	+21,8	+20,5	+14,5	nil
Pig Iron	+ 8,9	+21,5	+36,4	+19,9	nil
Copper	+93,7	−34,6	+ 4,4	+37,4	+ 8,9
Zinc	+42,8	+25,6	+18,0	− 4,8	−11,5
Aluminium	+11,3	+27,3	+ 6,4	+31,2	+ 5,5
Mechanical Eng. Materials	+10,7	+19,4	+24,3	+12,1	+ 2,9
Electrical Eng. Materials	+13,6	+25,4	+20,8	+10,1	+ 1,9
Coal	+57,2	+ 6,9	+34,5	+49,2	nil
Electricity, Gas, Water	+ 8,6	+ 0,1	+25,3	+33,3	+29,7

EMPLOYMENT in the Metal and Engineering Industries.



CAPITAL EXPENDITURE in Rand (Million) by the Metal and Engineering Industries



Steel and Engineering Industries Federation of South Africa

Incorporated Association not for Gain

Head Office:
FIRST FLOOR, METAL INDUSTRIES HOUSE
84, Marshall Street
JOHANNESBURG
2001
Telegraphic Address: "VITAL"
Telex: 8-7746 SA

P.O. Box 1338
Johannesburg
2000

Telephone
833-6033/41

ASSOCIATIONS FALLING WITHIN THE FEDERATION

Aluminium Die Casting Association of South Africa.
Association of Electric Cable Manufacturers of South Africa.
Association of Metal Sprayers.
Automotive Parts Production Engineers' Association.
Bright Bar Association.
Cape Engineers' and Founders' Association.
Constructional Engineering Association.
Covered Conductor Manufacturers' Association.
Domestic Appliance Manufacturers' Association of South Africa.
East London Engineers and Founders Employers' Association.
Edge Hand and Small Tool Manufacturers' Association.
Electrical Engineering and Allied Industries Association.
Electronic Component Manufacturers' Association.
Electronics and Telecommunications Industries Association.
Engineers' and Founders' Association (Transvaal, Orange Free State and Northern Cape).
Ferro Alloy Producers' Association.
Fire Protection Industries Association of South Africa.
Gas Cleaning Equipment Suppliers' Association of South Africa.
Gate and Fence Manufacturers' Association of the Transvaal.
Heavy Engineering Manufacturers' Association.
Hydraulics and Pneumatics Association.
Iron and Steel Producers' Association of South Africa.
Lift Engineering Association of South Africa.
Light Engineering Industries Association of South Africa.
Machine Engravers' Association.
Materials Handling and Construction Plant Association of South Africa.
Natal Engineering Industries Association.
Non-Ferrous Metal Industries Association of South Africa.
Plastics Manufacturers' Association of South Africa.
Plumbers and Engineers Brassware Manufacturers' Association.
Port Elizabeth Engineers' Association.
Precision Manufacturing Engineers' Association.
Pressure Vessel Manufacturers' Association of South Africa.
Radio, Appliance and Television Association of South Africa.
Sheet Metal Industries Association of South Africa.
S.A. Agricultural and Irrigation Machinery Manufacturers' Association.
S.A. Air Conditioning Equipment Manufacturers' Association.
S.A. Association of Shipbuilders and Repairers.
S.A. Burglar Alarm Systems Association.
S.A. Electroplating Industries Association.
S.A. Fabric Reinforcement Association.
S.A. Fasteners Manufacturers' Association.
S.A. Hot Dip Galvanisers' Association.
S.A. Industrial Refrigeration and Air Conditioning Contractors' Association.
S.A. Lighting Fittings Association.
S.A. Machine Tool Manufacturers' Association.
S.A. Production Founders' Association.
S.A. Pump Manufacturers' Association.
S.A. Radio Common Carrier Association.
S.A. Radio Manufacturers' Association.
S.A. Reinforced Concrete Engineers' Association.
S.A. Tube Makers' Association.
S.A. Valve Manufacturers' Association.
S.A. Wire and Wire Rope Manufacturers' Association.
S.A. Wrought Non-Ferrous Metal Manufacturers' Association.
Southern African Water and Sewage Plant Suppliers' Association.
Steel Kitchen Furniture Manufacturers' Association.
Television Aerial Installers' Association of South Africa.
Television Antenna Manufacturers' Association of South Africa.
Television Manufacturers' Association of South Africa.
Transvaal and O.F.S. Foundry Association.

ADDRESSES OF AREA DIVISIONS AND BRANCH ASSOCIATIONS WITHIN SEIFSA

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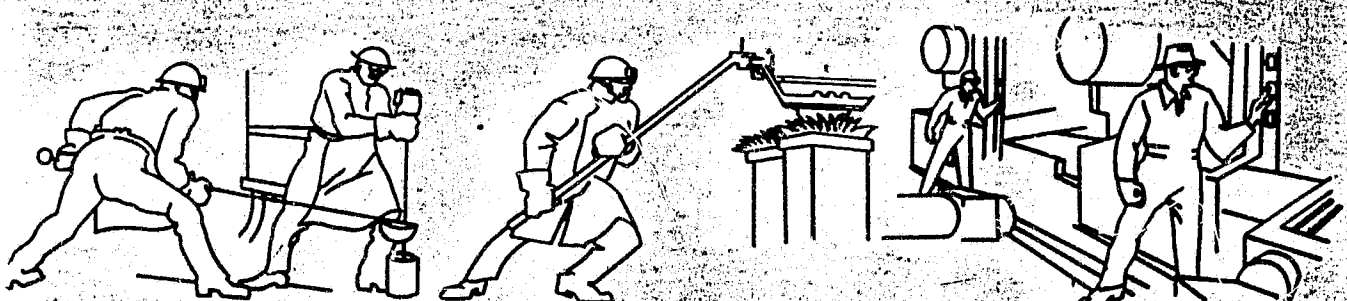
ECON LIB

ISCOR

A BRIEF DESCRIPTION OF ITS GROWTH AND OPERATIONS



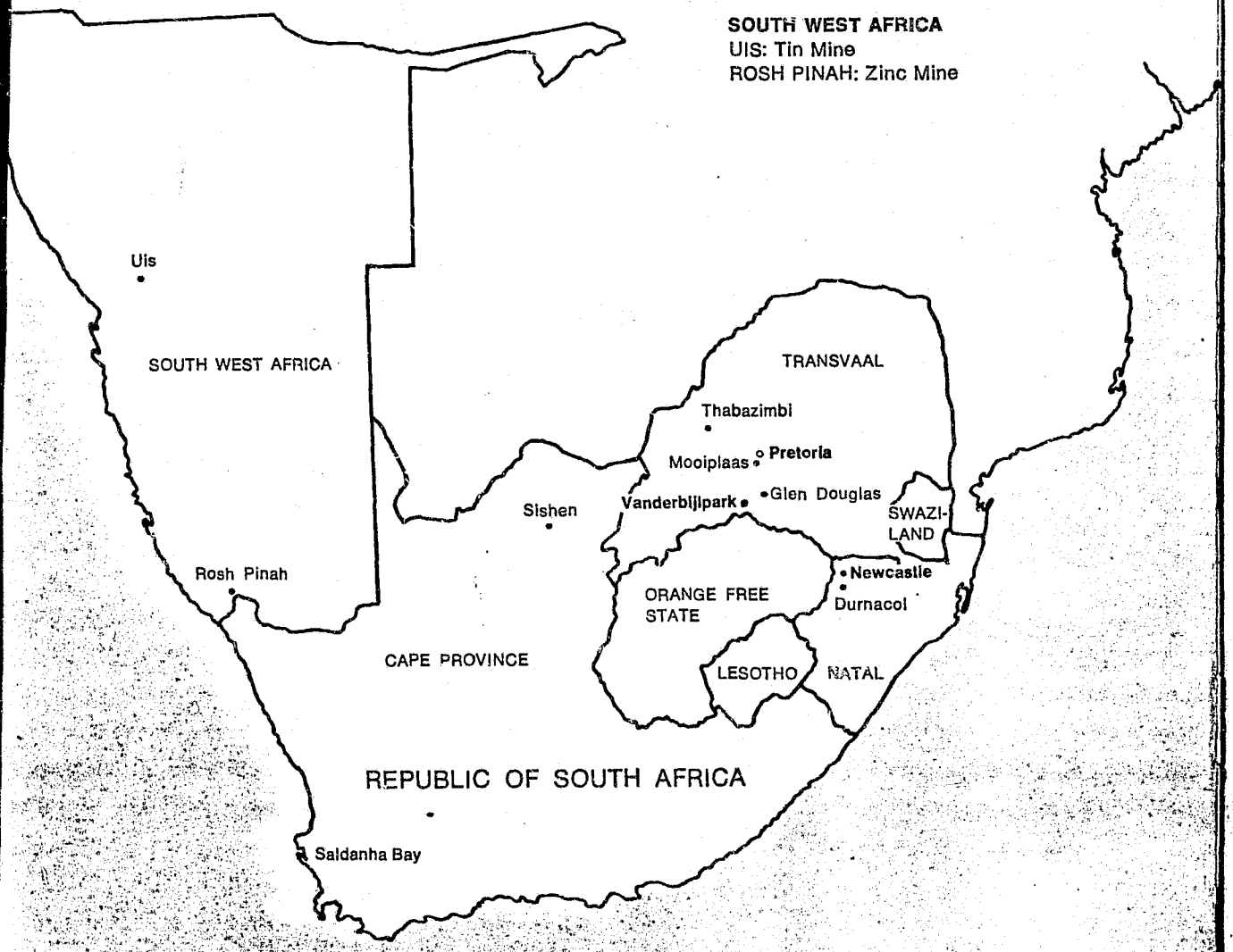
Iscor centres

TRANSVAAL
PRETORIA: Headquarters and Works
VANDERBIJLPARK: Works
THABAZIMBI: Iron Ore Mine
MOOIPLAAS: Dolomite Quarry
GLEN DOUGLAS: Dolomite Quarry

NATAL
NEWCASTLE: Works
DURNACOL: Colliery

CAPE PROVINCE
SISHEN: Iron Ore Mine
SALDANHA BAY: Ore Export Harbour being built and site for proposed Semis Plant

SOUTH WEST AFRICA
UIS: Tin Mine
ROSH PINAH: Zinc Mine



Issued in February 1974.

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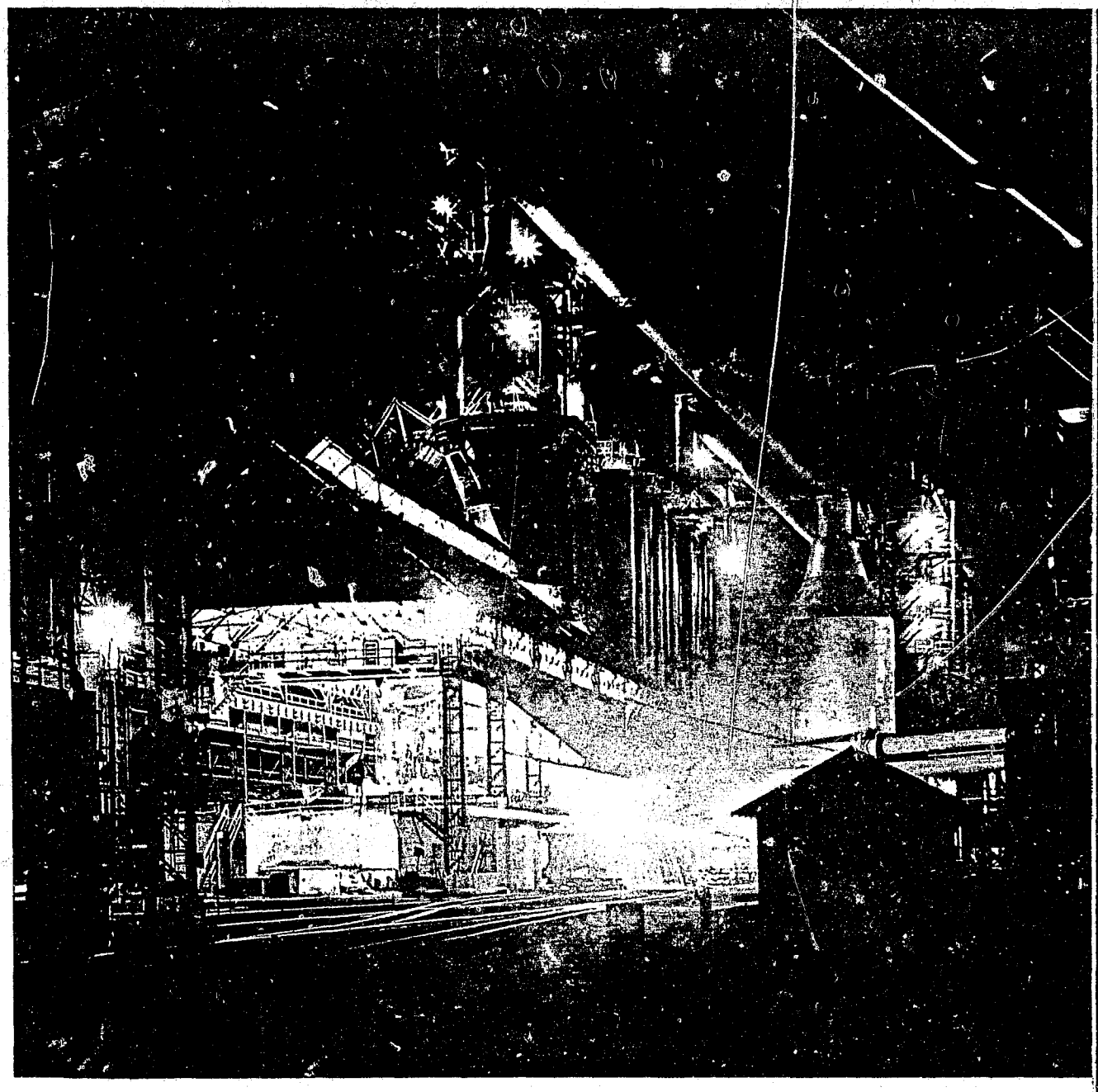


A Pretoria Works blast furnace being tapped.

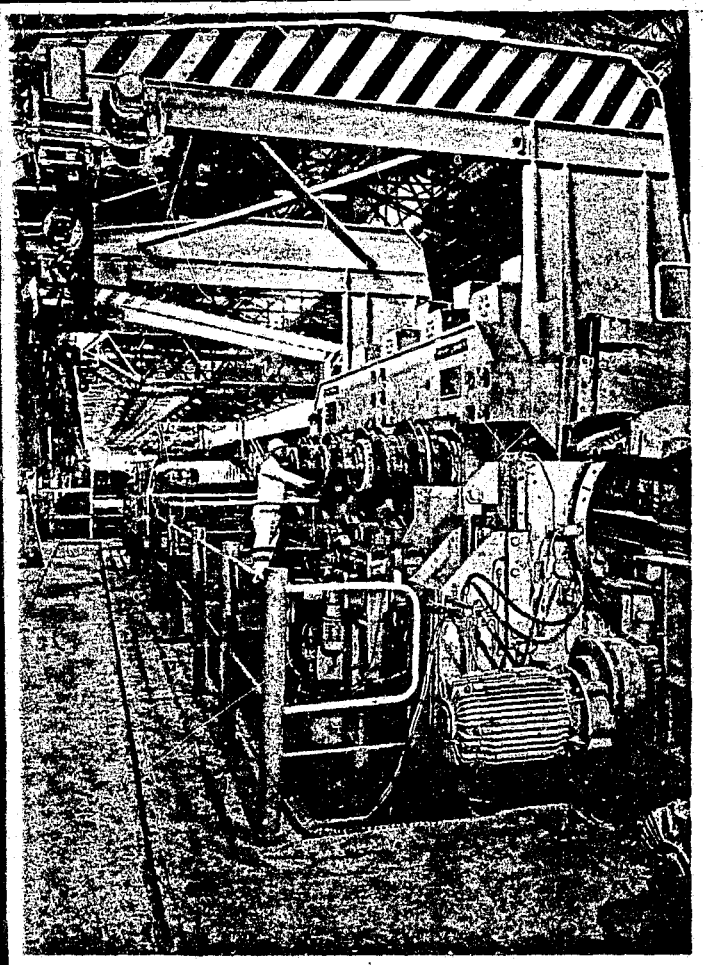
ISCOR

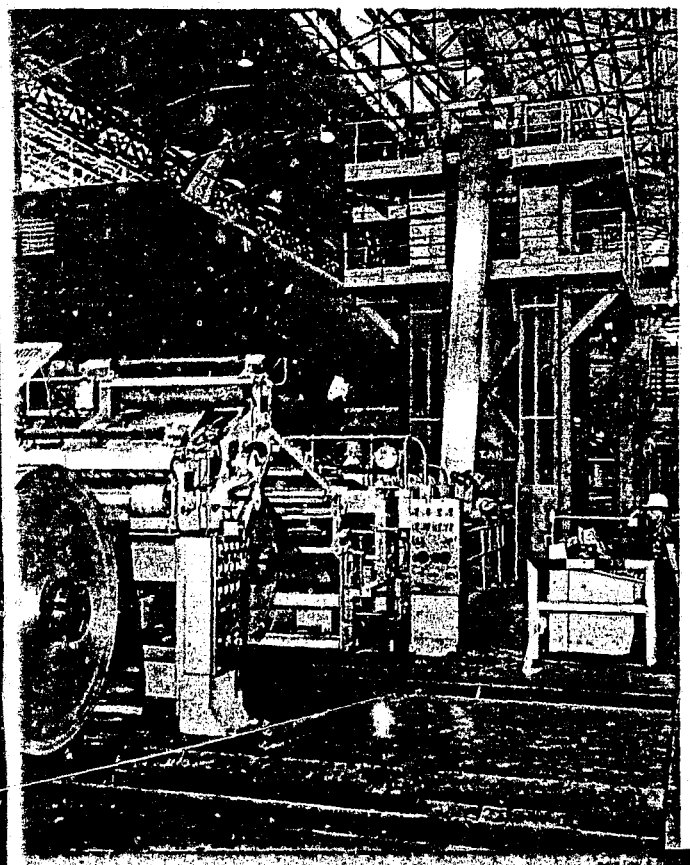
FOUNDING AND DEVELOPMENT

The South African Iron and Steel Industrial Corporation, Limited – generally known as Iscor – was established in 1928 in terms of the Iron and Steel Industry Act, with the object of producing iron and a range of steel products from indigenous raw materials.

It commenced production at Pretoria in 1934, the infant steelworks having been designed for a capacity of only 160 000 ingot tons per annum. However, in spite of many adversities, there proved to be a ready and increasing demand for its products and extensions were soon undertaken. The rate of output was doubled within the first five years, but then the Second World War intervened and normal production had to be curtailed so as to concentrate manufacturing operations on South Africa's armaments programme.

During hostilities, plans had been formulated for lessening the gap between supply and demand by





Roller straightening machine, Pretoria Works.

BOTTOM: *Part of electrolytic tinning line, Vanderbijlpark Works.*

embarking on further extensions. Land was acquired where the modern town of Vanderbijlpark is situated today, and in 1942 a plate mill was erected on the site.

In 1947, when the Pretoria Works was already producing at a rate of almost 600 000 tons per annum, it was decided to proceed with the plans for erecting a fully integrated steelworks at Vanderbijlpark. Several major units were started up there in 1950, and three years later the joint annual steel production of the two works exceeded 1 million tons.

Since that time, production has been gradually increased to the present level of about 4 million ingot tons per annum – in other words, 25 times Iscor's initial capacity. The larger part of current production is contributed by the Vanderbijlpark Works.

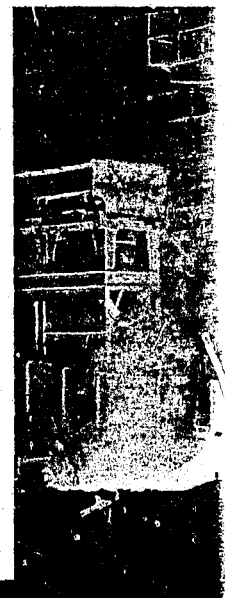
In order to keep pace with the long-term rise in the Republic's demand for steel, and also with a view to maintaining or even increasing the supply of certain steel products to neighbouring countries, Iscor is now engaged in the largest expansion scheme ever undertaken since its inception. The first phase of this scheme is scheduled to be completed in 1976, raising Iscor's annual capacity to about 6 500 000 tons of liquid steel.

Part of this phase is the building of a third fully integrated steelworks, at Newcastle in Natal, where the first major units are rapidly nearing the production stage. The second phase will probably be completed by 1983, increasing the Corporation's total annual steel-making capacity to approximately 10,5 million tons. The target set for the Vanderbijlpark Works in terms of this expansion programme is 6 million tons, whilst almost 3 million tons will be contributed by the Newcastle Works and some 1,5 million by the Pretoria Works. Although the latter's output is not to be substantially increased, owing mainly to area limitations, existing plant is being modernized and smaller extensions are to be made.

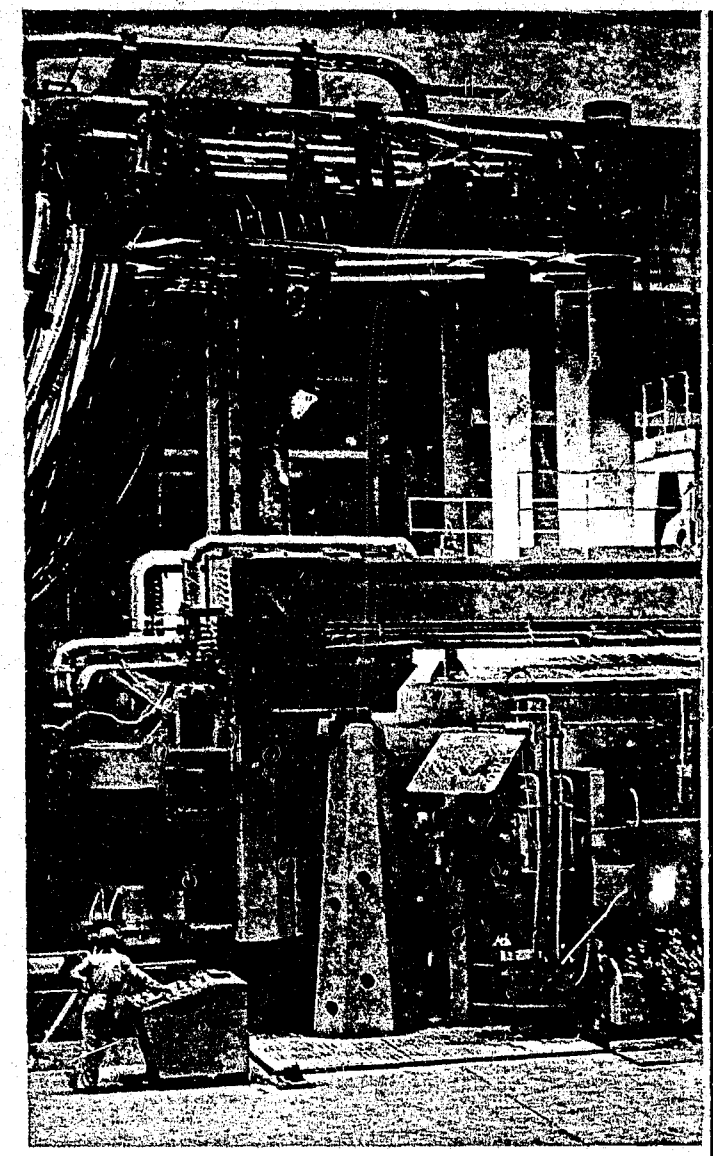
The capital cost of the modernization and expansion programme in respect of the three works up to 1983, is estimated at some R2 500 million. Provision is also being made for an increased production of iron ore and other raw materials to meet Iscor's internal requirements.

Coils of strip, Vande

Tapping of 400-ton Vanderbijlpark Wor

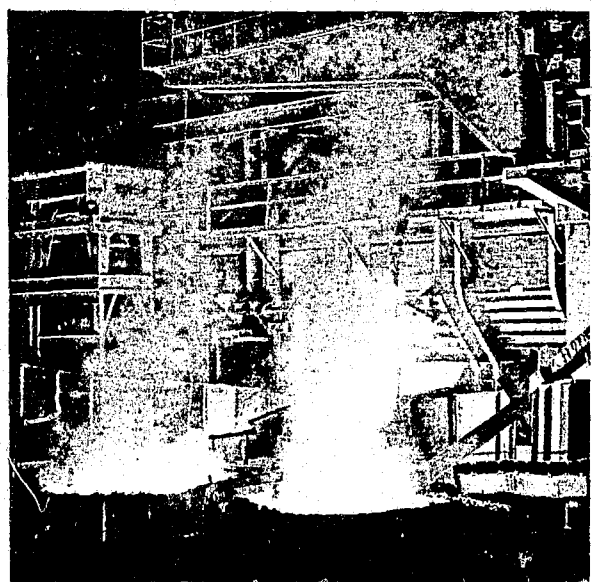


Coils of strip, Vanderbijlpark Works.



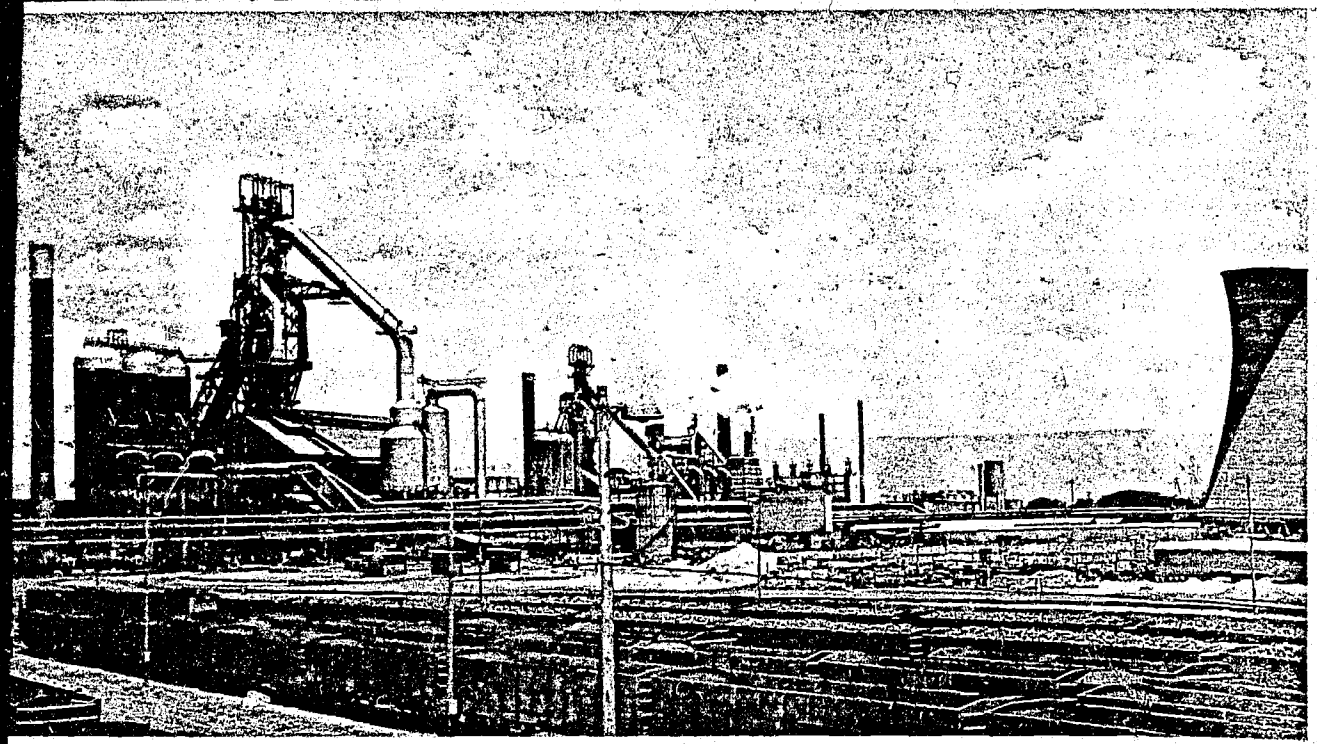
An electric arc furnace, Vanderbijlpark Works.

Tapping of 400-ton open-hearth furnace, Vanderbijlpark Works.



FINANCIAL STRUCTURE

Iscor is a semi-State Corporation by virtue of the fact that the Government holds all the A and B shares. According to the Iron and Steel Industry Act (1928), Iscor was originally provided with an authorized share capital of R7 000 000, divided into 500 000 ordinary A shares and 3 000 000 ordinary B shares of R2 each. In later amendments to the Act, the Board of Iscor was authorized, with the approval of the State President, to increase the share capital by issuing additional ordinary B shares of R2 each, not exceeding R244 000 000. The Board may, likewise with the approval of the State President, in lieu of issuing any number of B shares, create an equivalent number of preference shares.



Blast furnace complex, Newcastle South Works.

Iscor Headquarters

The present authorized share capital amounts to R251 000 000, divided into 500 000 A shares of R2 each and 125 000 000 B shares or preference shares of R2 each. At the end of the 1972/73 financial year the issued and fully paid-up share capital amounted to R165 200 000, made up as follows:

500 000 A shares of R2 each	R 1 000 000
81 880 364 B shares of R2 each	R163 760 728
219 636 7½% cumulative preference shares of R2 each	R 439 272
	R165 200 000

Iscor finances its investment in capital works from net internal cash flow (mainly depreciation, replacement provisions, reserves and other amounts retained from profits) and from share capital and loans.

The Corporation is required to issue a report annually for laying before both Houses of Parliament. This must include, amongst others, a statement describing its operations, along with the financial results for the year under review.

LEGAL AND TAX STATUS

Iscor has the legal status of a body corpo is capable of performing all acts necessary incidental to, the exercise of its powers performance of its functions under the I Steel Industry Act, as amended.

The Corporation is subject to income accordance with the country's normal inco legislation, but is exempt from undistributed tax. It may apply for exemption from the p of non-resident's tax on interest in respect o seas loans made for its expansion programm

MANAGEMENT

The operations trolled by a Boar members. By virt of A shares, five State President, v chairman and wh the Board as m pointed by the shares.

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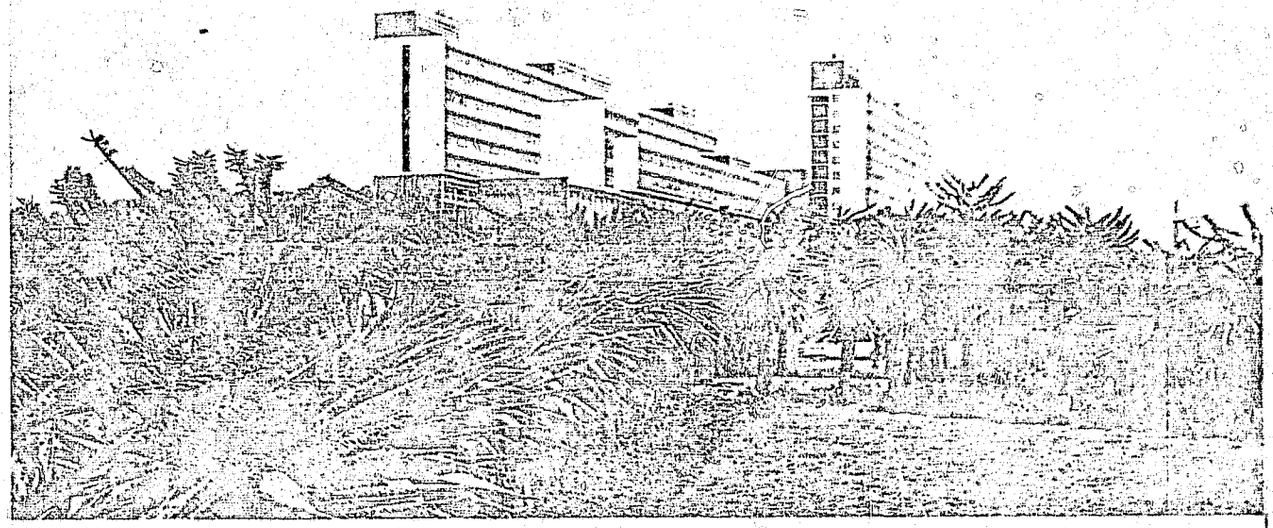
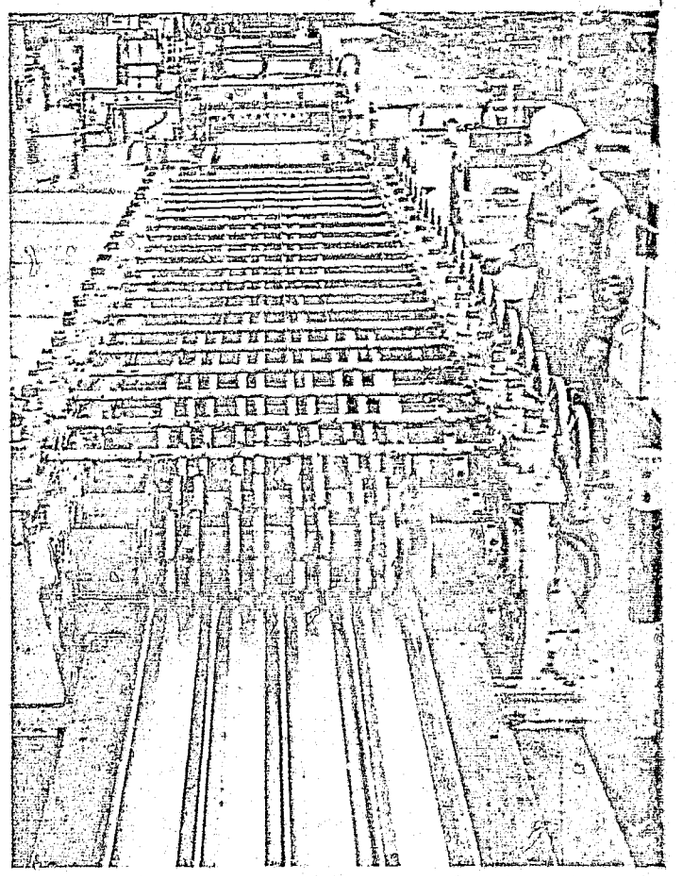


Iscor Headquarters Building, Pretoria.

South Works.

Roll-forming line, Vanderbijlpark Works.



MANAGEMENT AND ORGANIZATION

The operations of Iscor are managed and controlled by a Board of Directors, consisting of nine members. By virtue of the Government's holding of A shares, five members are appointed by the State President, who designates one of them to be chairman and who may appoint any member of the Board as managing director. Four are appointed by the holders of the B and preference shares.

The Board may appoint a general manager (a post not existing at present, the managing director being the principal executive officer), and one or more divisional general managers, who have responsibility for the proper management of the Corporation's affairs.

All mining, production and selling activities are administered from the headquarters in Pretoria. Besides several public companies controlled by Iscor or with which it is associated, it has a financial interest in various companies whose operations are ancillary to its main production function. The Corporation also has permanent offices in Bulawayo, London and New York.

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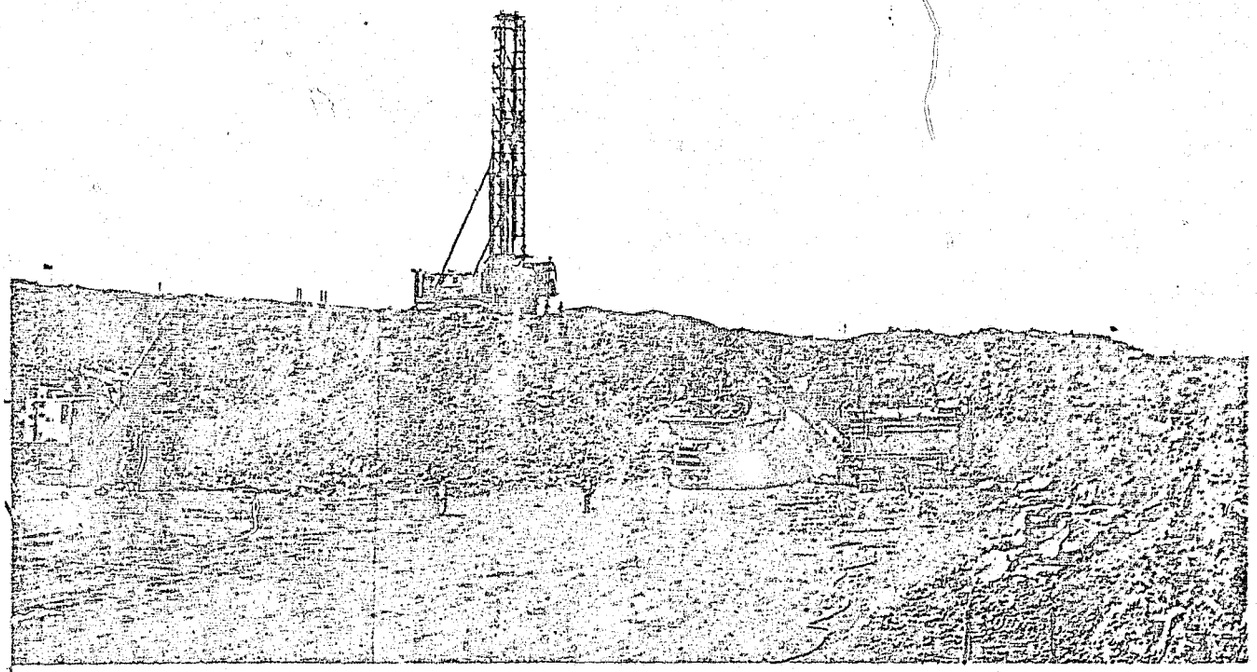


Open-cast mining of iron ore at Sishen.

Mooiplaas dolomite quarry, near Pretoria.

RAW MATERIALS

All of Iscor's iron ore requirements are supplied by its two mines, at Sishen, in the northern Cape Province, and at Thabazimbi, in the north-western Transvaal. In the vicinity of Sishen and Postmasburg, the Corporation has estimated reserves of approximately 4 000 million tons of high-grade haematite ore, whilst reserves at Thabazimbi amount to over 80 million tons. In view of these large deposits, Iscor has embarked upon a project for the export of substantial tonnages of iron ore from Sishen through a new deep-water terminal being built at Saldanha Bay (see pages 11 and 12).

The Sishen mine currently produces at the rate of approximately 3,5 million tons per annum, but work is in progress for increasing the annual capacity of the preparation plant to 9,6 million tons. This higher output is intended for Iscor's own iron ore requirements; ore for export through Saldanha

Bay will be supplied from extensions to be developed adjacent to the current workings in the same ore-bearing area.

The Thabazimbi mine produces at an annual rate of approximately 2 million tons, almost all of which is supplied to the Pretoria Works.

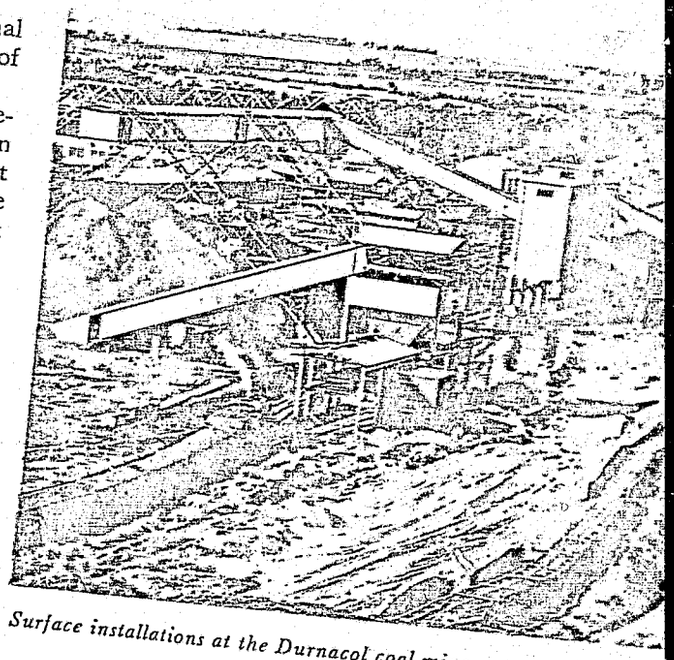
Part of the Corporation's coking coal requirements comes from Durnacol, its own colliery in Natal, which yields about 840 000 tons of straight coking coal per annum. This rate of output is to be almost doubled by 1977/78. Roughly 80 per cent of the coal used for coking purposes at the works, as well as for steam and gas generation, is purchased from other collieries.

Metallurgical dolomite is obtained from Mooiplaas and Glen Douglas, two Iscor-owned quarries situated near the Pretoria and Vanderbijlpark Works, respectively, whilst another Transvaal quarry – operated by Amcor Limited, a company controlled by Iscor – supplies dolomite to the Newcastle Works. The present total supply of dolomite from these three sources is approaching a million tons a year.

Slightly more than half of the tin required for the production of electrolytic tinplate at the Vanderbilpark Works is obtained from the Uis mine, in South West Africa. It produces at an annual rate of about 1 200 tons of tin concentrate, yielding on average over 64 per cent of tin metal. The remainder of Iscor's tin requirements is purchased from other sources.

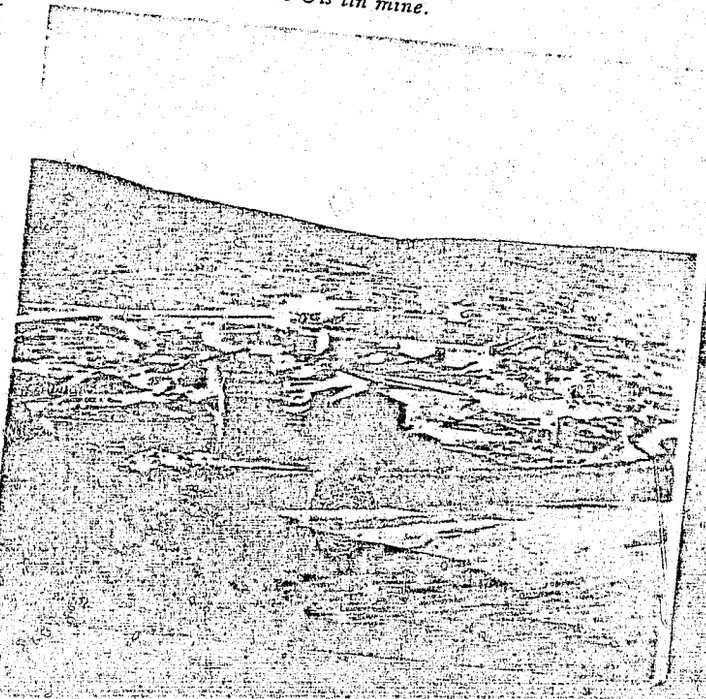
Zinc for the production of galvanized sheet at the Vanderbijlpark Works and galvanized wire at the Pretoria Works is obtained from the Rosh Pinah mine in South West Africa, operated by a company in which Iscor has a controlling interest. Current production of zinc concentrate amounts to almost 30 000 tons per annum, with a metal yield of 58 per cent. In addition, this mine produces a substantial tonnage of lead concentrate, containing also small quantities of copper and silver.

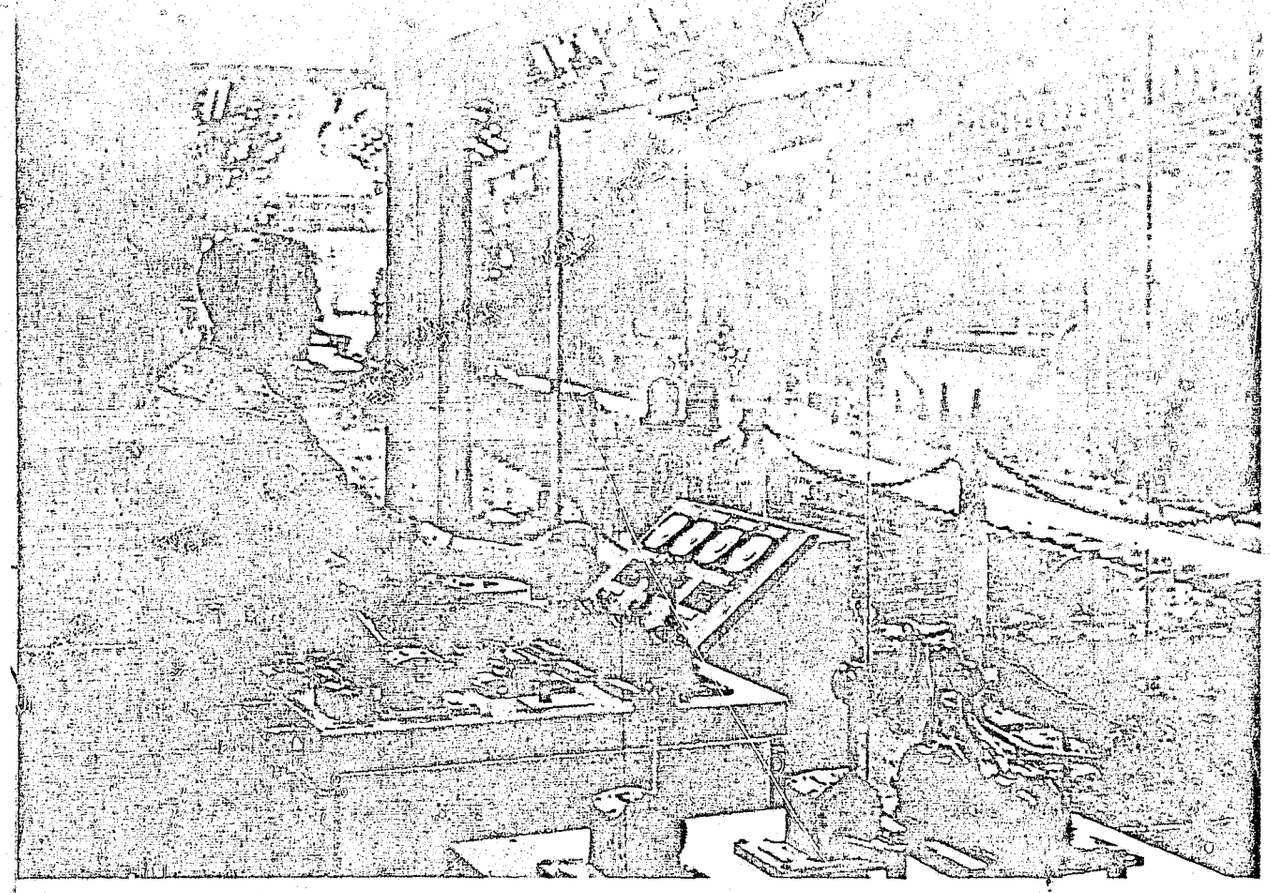
Iscor therefore finds itself in the fortunate position of being self-sufficient in regard to its main raw materials. The only raw materials now being purchased from outside suppliers are coal, tin, manganese, limestone and fluorspar, all of which are obtainable from South African sources.



Surface installations at the Durnacol coal mine.

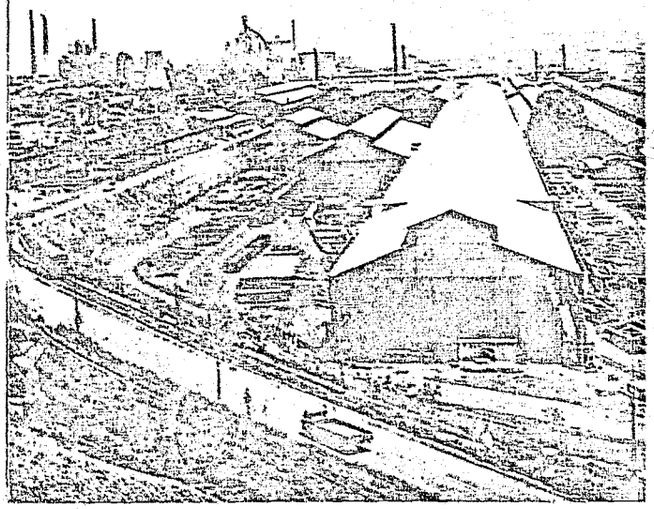
Concentrate plant at the Uis tin mine.





Control cabin for hot-strip mill, Vanderbijlpark Works.

Part of the Pretoria Works.



PRODUCTION

Iscor produces a wide range of finished and semi-finished rolled, drawn and forged steel products, together with pig iron, ferro-manganese and a variety of coke oven by-products. The production and processing plants are mostly modern, with a very high capacity utilization rate.

A significant feature of the Corporation's present operations is the production of oxygen-blown steel in a rotor plant at each of the two steelworks (Newcastle steel production plants are still under construction), whilst the introduction of a tandem furnace at Vanderbijlpark was an innovation in steel-making technique. However, Iscor's expansion programme provides for the gradual replacement of existing steel production units – except its modern electric arc furnaces – with basic oxygen furnaces.

The following schedule shows the main production units at present and the capacity of each (given in annual metric tons, except for the blast furnaces):

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Pretoria Works

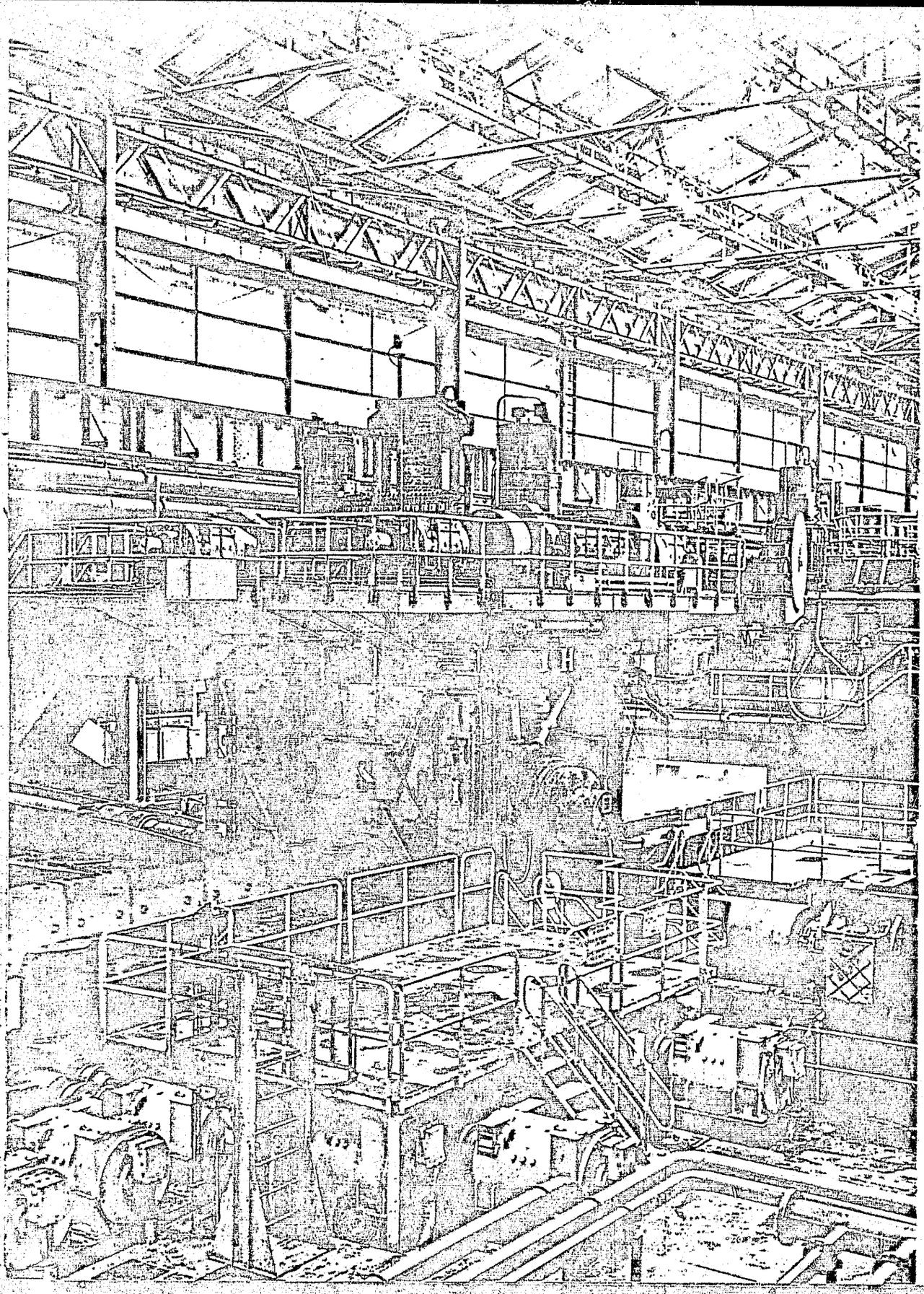
Four blast furnaces	3 980 tons of hot metal per day
Three open-hearth furnaces	575 000 ingot tons
One Graeff rotor oxygen furnace	700 000 ingot tons
Two electric arc furnaces	95 000 ingot tons
One blooming mill	1 410 000 ingot tons input
One heavy-section mill	310 000 finished tons
One medium-section mill	140 000 finished tons
One billet mill	650 000 billet tons
Two light-section mills	280 000 finished tons
Two rod mills	340 000 finished tons
One wire plant with galvanizing facilities	150 000 finished tons

Vanderbijlpark Works

Four blast furnaces (the fourth blown in in September 1973)	7 520 tons of hot metal per day initially, 8 800 tons of hot metal per day eventually
Six open-hearth furnaces	1 150 000 ingot tons
One Graeff rotor oxygen furnace, operating in turn with a tandem oxygen furnace (Iscor patent)	840 000 ingot tons
Two electric arc furnaces	690 000 ingot tons
One slabbing mill	2 000 000 slab tons
One 3 658 mm plate mill	351 000 finished tons
One combination slabbing/plate mill	1 700 000 ingot tons rolled into slabs; or 468 000 slab tons, equivalent to 350 000 finished tons, rolled into plate
One 1 422 mm hot-strip mill	1 700 000 slab tons input, equivalent to 1 400 000 tons of finished products
Three galvanizing lines	348 000 finished tons
One electrolytic tinning line	223 000 finished tons
One four-stand and one five-stand tandem cold mill	907 000 tons of cold-rolled material, equivalent to 816 000 finished tons

Newcastle Works

Three blast furnaces	180 tons of FeMn per day and 3 040 tons of hot metal per day, presently converted to pig iron for the supply of the local pig iron market and for export under contract until 1974



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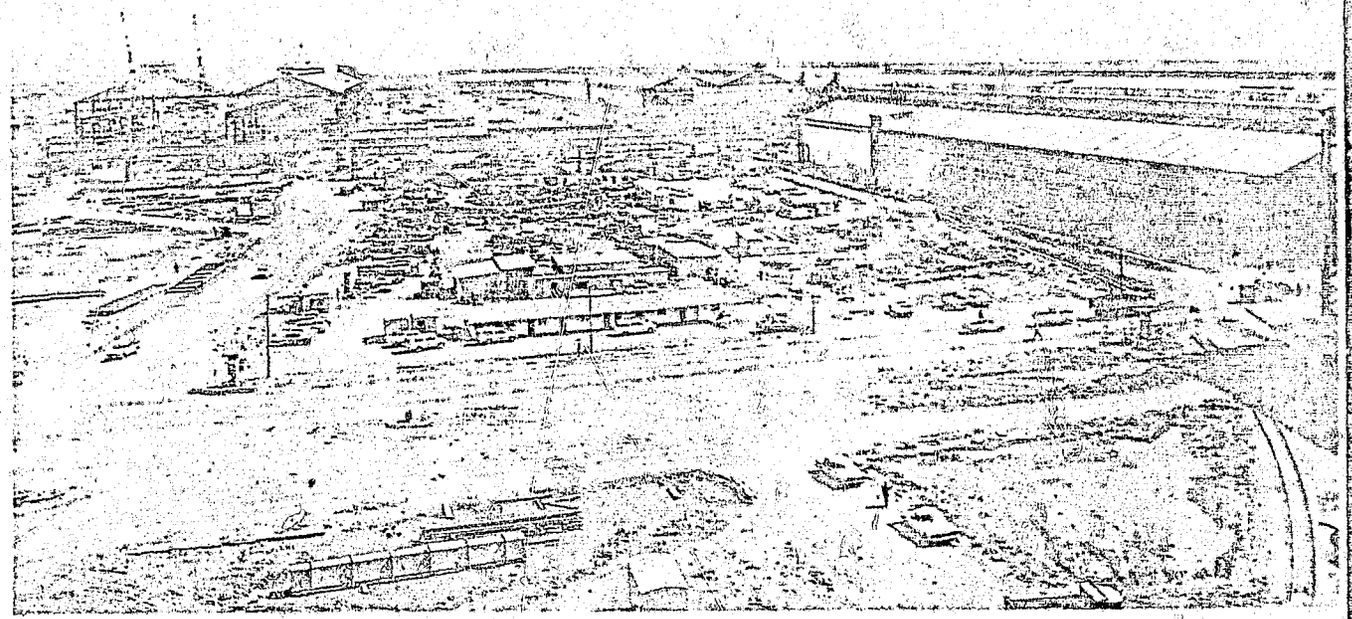


The extensive mills complex under construction on the Newcastle North Works site.

Combination slabbing/plate mill, Vanderbijlpark Works.

MARKET

Iscor's main steel product groups consist of semis, structural sections, bars and rods, rails and fishplates, plates, sheets and strip, tinplate and blackplate, wire and wire rod, as well as shafting and forgings. These products are distributed throughout the country, to the South African Railways and Harbours, Government departments, provincial administrations and local authorities, the mines, manufacturing industries, merchants and private consumers. Several products are also supplied to other African countries and exported, on a limited scale, to overseas customers.

During the 1972/73 financial year an estimated total of 3 962 100 tons of rolled, drawn and forged steel products was supplied from South African and overseas sources to consumers in the Republic, South West Africa and neighbouring African countries. Of this tonnage Iscor supplied 72,2 per cent and other South African producers 22,5 per cent, whilst 5,3 per cent was imported. The Corporation is the sole local producer of plates, sheets, strip and tinplate.

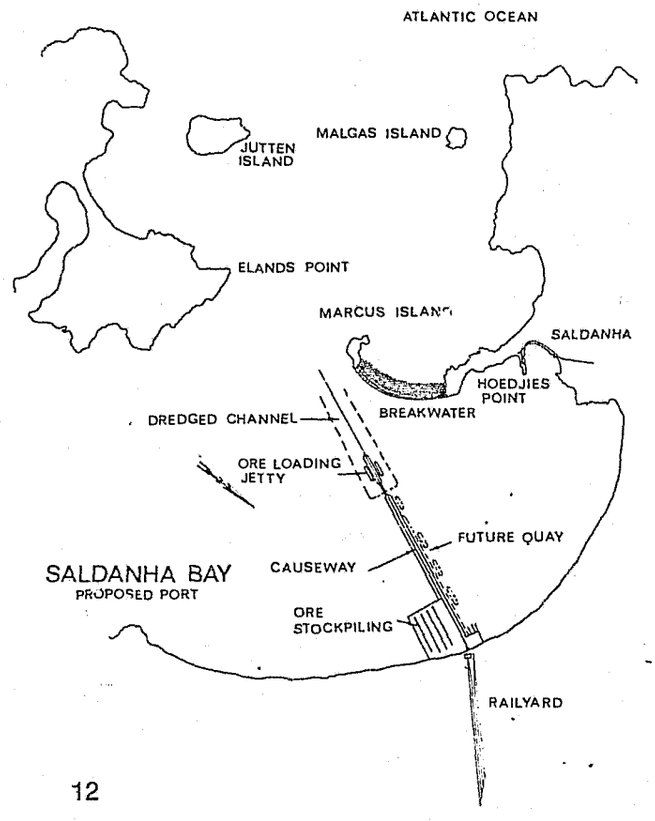
SISHEN-SALDANHA BAY PROJECT

Work started in June 1973 on the comprehensive Sishen-Saldanha Bay ore export scheme, which promises to become one of the largest development projects ever undertaken in the Republic. It follows more than three years of investigations and feasibility studies by Iscor, in conjunction with local and overseas research organizations and consulting engineers, which culminated in parliamentary approval for the Corporation to proceed with the scheme.

It comprises the development of a new opencast mine at Sishen for the production of high-grade haematite ore for export, the building of a railway line over a distance of 860 km to Saldanha Bay, on the west coast, and the construction of a deep-water loading terminal at the Bay.

Based on the contracts concluded and estimates of the few still to be awarded, and providing for contingencies, cost escalation, interest on loan capital and other relevant cost items, the total outlay for the scheme should amount to R460 million (excluding the cost of electrification of the railway line, which was decided upon at a later stage). According to the construction programme, the first cargoes of iron ore will be shipped from the new harbour during the second half of 1976. The export target of 15 million tons of ore per annum, on which Government approval for the scheme was based, should be reached in the late 1970's or early 1980's, but the project has been planned and designed for more than double this capacity.

Aerial view of Saldanha Bay.



Layout of deep-water ore terminal at Saldanha Bay.

SEMIS PLANT

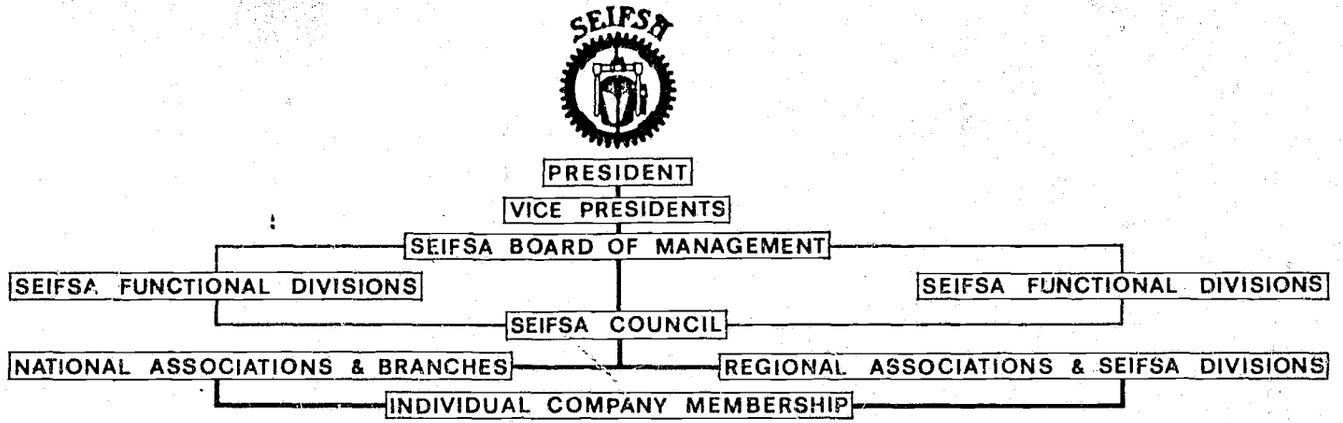
Coupled with the Sishen-Saldanha Bay iron ore project is a scheme for the production and export of semi-processed steel products (semis). For this purpose Iscor entered into an agreement with the Austrian steel producer, Vöest-Alpine AG, to erect a plant at Saldanha Bay for the production of semis.

The estimated cost of the project is between R600 million and R700 million, and the plant will have an initial capacity of approximately 3 million tons of semis per annum, destined exclusively for export. However, the layout has been designed for an eventual capacity of 12 million tons.

The works at Saldanha Bay will comprise two blast furnaces, three LD converters, several continuous casting plants and a billet mill for rolling continuously cast blooms into billets. This semis scheme will earn valuable foreign exchange for South Africa and will become an important source of raw materials for some overseas steel concerns.

GENIEC
IRON PLANT

STEEL AND ENGINEERING INDUSTRIES FEDERATION OF SOUTH AFRICA



SEIFSA MAIN DIVISIONS & UNITS

ADMINISTRATIVE DIVISION
- FINANCE & ACCOUNTS
- LIBRARY
- PUBLICATIONS
- PUBLIC RELATIONS
- SECRETARIAL SERVICES TO ASSOCIATIONS
- SEIFSA PARLIAMENTARY COMMITTEE AND LEGISLATION

BLACK LABOUR UNIT
- ADMINISTRATION OF BLACK AFFAIRS
- BLACK LABOUR RELATIONS ADVISORY AND LIAISON SERVICES
- BLACK WAGES AND PRODUCTIVITY
- IN-SERVICE TRAINING FOR BLACKS
- BLACK LABOUR AFFAIRS

ECONOMICS DIVISION
- CUSTOMS TARIFF MATTERS
- ECONOMIC SURVEYS RELATED TO THE SEIFSA SECTORS OF INDUSTRY
- IMPORT AND EXPORT MATTERS
- SEIFSA STATISTICS
- SPECIAL ASSIGNMENTS & REPORTS
- TAXATION
- TENDER & CONTRACT CONDITIONS
- TRANSPORTATION

EDUCATION & TRAINING DIVISION
- APPRENTICE TECHNICIAN AND EMPLOYEE TRAINING
- CAREERS GUIDANCE ADVISORY SERVICE
- CO-ORDINATION OF EDUCATION AND TRAINING
- METAL & ENGINEERING INDUSTRIES EDUCATION & TRAINING FUND ADMINISTRATION
- RECRUITMENT & PLACEMENT SERVICES
- SEIFSA BURSARY AWARDS ADMINISTRATION
- SEIFSA TECHNOLOGICAL FUND ADMINISTRATION

FUNDS ADMINISTRATION DIVISION
- ENGINEERING & ALLIED INDUSTRIES EMPLOYEES MEDICAL AID FUND
- METAL INDUSTRIES GROUP LIFE & PROVIDENT FUND
- METAL INDUSTRIES GROUP PENSION FUND
- METAL INDUSTRIES MEDICAL AID FUND
- SICK PAY FUND FOR THE IRON STEEL ENGINEERING & METALLURGICAL INDUSTRY

COMMUNICATIONS UNIT
- INDUSTRIAL RELATIONS COMMUNICATION PROJECT - DEVELOPMENT AND IMPLEMENTATION

LABOUR DIVISION
- INDUSTRIAL LEGISLATION AND GENERAL LABOUR RELATIONS AND LIAISON
- NATIONAL INDUSTRIAL COUNCIL LIAISON
- NEGOTIATION OF INDUSTRIAL AGREEMENT TECHNICAL SCHEDULES
- NEGOTIATION OF INDUSTRIAL AGREEMENTS
- PARTICIPATION ON STATUTORY BODIES RELATING TO LABOUR MATTERS

TECHNICAL DIVISION
- LIAISON WITH
  S A BUREAU OF STANDARDS
  COUNCIL FOR SCIENTIFIC & INDUSTRIAL RESEARCH
  NATIONAL PRODUCTIVITY INSTITUTE
- METRICATION
- POLLUTION AND THE ENVIRONMENT
- STANDARDS
- STRUCTURING OF INDUSTRIAL AGREEMENT TECHNICAL SCHEDULES

1980/1981 Officers and Board of Management

PRESIDENT:	L. Boyd
VICE-PRESIDENTS:	J. E. D. Bramwell P. E. Streicher R. T. Shaw
HONORARY VICE-PRESIDENTS:	W. E. Kirkwood W. L. Morrison J. M. Russell
MEMBERS:	W. G. Boustred A. L. Charles J. C. de Waal C. D. Ellis I. S. Haggie R. B. Hughes I. F. Kerr T. M. King Dr. L. B. Knoll F. P. Kotzee W. N. Randell P. W. Sceales
CO-OPTED MEMBERS:	N. D. Baxter R. A. Boustred R. R. Callanan K. C. Comins K. J. Crawford J. H. Fehrsen H. A. Godwin H. P. Joubert Dr. J. P. Kearney R. Mason C. J. M. Prinsloo R. M. F. Seawright W. van Wyk W. E. Wentges I. L. Whitby
CO-OPTED TO REPRESENT SEIFSA DIVISIONS:	
Automotive Parts Manufacturing Division:	C. J. Beyleveld
Electrical, Electronics, Telecommunications and Allied Industries Division:	J. W. Nelson
Engineering Industries Division:	A. L. Snell
Foundry Industry Division:	J. T. Davies
Iron and Steel Division:	K. T. Brightman
Ferro Alloys Division:	P. E. Streicher
Manufacturing Industries Division:	S. W. Knobel
Plastics Industries Division:	P. F. S. King
DIRECTOR:	Dr. E. P. Drummond

HEAD OFFICE	P.O. Box 1338, Johannesburg 2000.
DIVISIONAL OFFICES	
CAPE	P.O. Box 1536, Cape Town, 8000.
NATAL	P.O. Box 4986, Durban, 4000.
BORDER	P.O. Box 27, East London, 5200.
MIDLANDS	P.O. Box 2221, Port Elizabeth, 6056.
TRANSVAAL	P.O. Box 1338, Johannesburg, 2000.

Cover Illustration

The ninth pre-reduction kiln at Highveld Steel and Vanadium Corporation Limited in its final stages of construction. Commissioned in July 1980 it has made possible a significant increase in production of iron, steel and vanadium slag.

Members of the Council

The SEIFSA Council is composed of representatives and alternates of Associations and Divisions within SEIFSA, together with persons specially appointed under the relevant provisions of the Federation's Articles of Association.

NAME	COMPANY
Annegarn, J. B.	Mono Die Engineers (Pty) Limited
Atkins, E. A. (Alternate)	The Butterfly Valve Co. (Pty) Limited
Bailey, R. E.	Dorbyl Limited
Baxter, N. D.	Dorbyl Heavy Engineering (Pty) Limited
Beard, S. W. (Alternate)	Loss Control (Pty) Limited
Bell, M. S. (Alternate)	Atlas Aircraft Corporation of South Africa (Pty) Limited
Beukes, W. J. (Alternate)	Union Steel Corporation (of South Africa) Limited
Beyleveld, C. J.	Silverton Engineering (A division of Associated Engineering Mant. Limited)
Boustred, R. A.	Scaw Metals Limited
Boustred, W. G.	Scaw Metals Limited
	Highveld Steel and Vanadium Corporation Limited
Boyd, L.	Highveld Steel and Vanadium Corporation Limited
Boynton-Lee, A. S. (Alternate)	African Malleable Foundries Limited
Bramwell, J. E. D.	Murray & Roberts Limited
Brass, C. R.	Dorbyl Marine (Pty) Limited
Brightman, K. T.	Dunswart Iron & Steel Works Limited
Brown, W. P. (Alternate)	Scaw Metals Limited
Burle, R. M. (Alternate)	Castle Brass Works (Pty) Limited
Callanan, R. R.	Highveld Steel & Vanadium Corporation Limited
Cassel, R. (Alternate)	C. & C. Electroplating Works (Pty) Limited
Charles, A. L.	GEC South Africa Limited
Collatz, R. A.	B.B.R. Burglar Alarms (Pty) Limited
Comins, K. C.	Barlow Rand Limited
Cooke, B.	Otis Elevator Company Limited
Coutts-Trotter, C. M.	Macdem (Pty) Limited
Crawford, K. J.	Huletts Aluminium Limited
Cullinan, N. M. (Alternate)	Cullinan Holdings Limited
Davies, J. T.	Ferrovorm Limited — Alberton Foundry Division
Davis, L. (Alternate)	Denver Metal Works (Pty) Limited
de Backer, P. F. A. (Alternate)	R. S. Trivett & Co. (Pty) Limited
de Jager, J. L.	General Mining Union Corporation Limited
de Waal, J. C.	Union Steel Corporation (of South Africa) Limited
Dickson, D. C.	I. E. S. Engineering Company (Pty) Limited
Dixon, H. (Alternate)	Scottish Cables (South Africa) Limited
Dixon, M.	Amalgamated Reinforcing (Pty) Limited
Dowse, R. E. (Alternate)	Q. D. Fire (Pty) Limited
Dupen, P. D. (Alternate)	Barlows Manufacturing Company Limited
Edmunds, S. W. (Alternate)	Dialoy Africa (Pty) Limited
Ellis, C. D.	Dorbyl Limited
Elston, C. C.	Improvair (Pty) Limited
Engelbrecht, J.	General Mining Union Corporation Limited
Fehrsen, J. H.	Dorbyl Automotive Products (Pty) Limited

Fiander, C. S.	Almaks Engineering (Pty) Limited
Foord, D. A. J.	Union Steel Corporation (of South Africa) Limited
Geisler, H.S. (Alternate)	Defy Industries (Pty) Limited
Godwin, H. A.	Stewarts & Lloyds of South Africa Limited
Gould, R. J.	STC Components Division
Gow, F. H. F.	Mather & Platt (South Africa) (Pty) Limited
Grews, D. C. L. (Alternate)	Cold-Air Installations (Pty) Limited
Gruss, A. I.	Huletts Metals (Pty) Limited
Haggie, I. S.	Haggie Rand Limited
Hall, J. C.	Southern Cross Steel, Division of Palmiet Chrome Corporation (Pty) Limited
Hancock, J. I.	Mining & Industrial Air Conditioning (Pty) Limited
Harmsworth, O. D. (Alternate)	Elgin Engineering Company Limited
Harrop-Allin (Jnr), G.	G. Harrop-Allin & Sons (Pty) Limited
Herbert, P. J. T.	Abercom Group Limited
Herr, C. M.	Jack's Fencing & Engineering Works (Pty) Limited
Hindley, R. P. (Alternate)	Melcorp South Africa (Pty) Limited
Hofmeyr, A. H. (Alternate)	E. S. & A. Robinson (Pty) Limited
Holland, J. L.	Airco Engineering (Pty) Limited
Holsteyn, H. W.	H.M. Machine Tools (Pty) Limited
Hopwood, L. R. (Alternate)	Plessey South Africa Limited
Hughes, R. B.	Globe Engineering Works Limited
Hugo, P.	Atlas Aircraft Corporation of South Africa (Pty) Limited
Illman, W. B.	Dorbyl Structures (Division of Dorbyl Structural Engineering (Pty) Limited)
James, J. S. (Alternate)	Gearings Foundry Limited
Jackson, E. W.	B. A. Buckley Engineering Co. (Pty) Limited
Jackson, K. (Alternate)	Dorbyl Structures (Division of Dorbyl Structural Engineering (Pty) Limited)
Joubert, H. P.	General Erection Co. (Pty) Limited
Kearney, Dr. J. P.	S.A. Manganese Amcor Limited
Kerr, I. F.	R. Hunter & Company (Pty) Limited
King, B. B. H.	Otis Elevator Company Limited
King, P. F. S.	van Leer South Africa (Pty) Limited
King, T. M.	Harnischfeger S.A. (Pty) Limited
Kirkwood, W. E.	Constructional Engineering Association
Klip, C.	Cape Steel Construction Company (Pty) Limited
Knobel, S. W.	Lasher Tools (Pty) Limited
Knoll, Dr. L. B.	Fedmech Holdings Limited
Kotzee, F. P.	South African Iron & Steel Industrial Corporation Limited
Kuijpers, G. (Alternate)	Siemens Limited
Lategan, D.	Schindler Fire & Security (Pty) Limited
Lee, L. (Alternate)	John Deere (Pty) Limited
le Roux, W. C. (Alternate)	L.M. Nywerhede Koöperatief Beperk
Levick, P. H.	Stewarts & Lloyds of South Africa Limited
Ludeman, R. (Alternate)	MRT Bartons (Pty) Limited
Makepeace, W. (Alternate)	Wil-Make (Pty) Limited
Malan, P. L. (Alternate)	Supreme Machinery Construction (Pty) Limited
Malan, S. F.	S.A. Smelting Works (Pty) Limited
Mandelzweig, G. (Alternate)	Steeledale Reinforcing & Trading Co. Limited
Marnewick, J. (Alternate)	Girlock (South Africa) (Pty) Limited
Mason, R.	SAFIM Manufacturing Limited
Matthew, B. S.	Port Elizabeth Engineering Association
Melvill, A. L. (Alternate)	Transalloys (Pty) Limited
Monthe, R. W.	Cobra Brassware (Pty) Limited
Moody, J. A. (Alternate)	Tank End Engineering (Pty) Limited
Moor, B. St. C.	R.S. Trivett & Co. (Pty) Limited
Morrison, W. L.	Natal Engineering Industries Association
Nash, F. D.	GEC Engineering (Pty) Limited
Nelson, J. W.	Bonar Long N.T.C. (S.A.) (Pty) Limited
Newman, J. P.	Afrox Limited
Oliver, H.	Elgin Engineering Company Limited

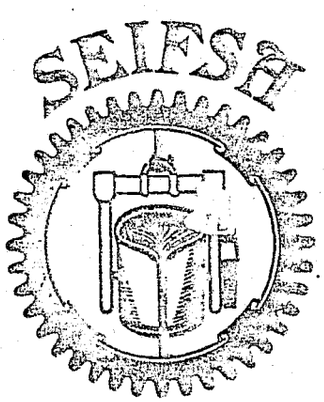
Pearson, H. G. (Alternate)	Pearson Manufacturing Co. (Pty) Limited
Per, S.	Lanark Engineering & General Supplies (Pty) Limited
Place, C. E. S.	National Bolts Limited
Price, T. L.	Dorbyl Structural Engineering (Pty) Limited
Prinsloo, C. J. M.	South African Iron & Steel Industrial Corporation Limited
Rademeyer, A. J. (Alternate)	Mitco Tool Company (Pty) Limited
Randell, W. N.	African Cables Limited
Reece, V.	Fensecure (Pty) Limited
Reid, H.	Vereeniging Refractories Limited
Reuss, K. M.	Siemens Cables (Pty) Limited
Rice, F. V.	Umgeni Iron Works (Pty) Limited
Roos, J. F. (Alternate)	Cape Engineers' & Founders' Association
Rose, R.	Industrial Conveyors (Pty) Limited
Rubé, W. (Alternate)	John Thompson Africa (Pty) Limited
Rümelin, K. R.	South African Iron & Steel Industrial Corporation Limited
Russell, J. M.	Globe Engineering Works Limited
Sampson, S. W. (Alternate)	South African General Electric Co. (Pty) Limited
Sayce, C. P.	GKN Millsteel (Pty) Limited
Sceales, P. W.	Dorbyl Limited
Schalkwyk, P. L.	Elecplating Supplies (Benrose) (Pty) Limited
Seawright, R. M. F.	The Steel Engineering Company Limited
Shaw, R. T.	Cementation Engineering (Pty) Limited
Shnaier, J. P. (Alternate)	Shnaier Metal Industries (Pty) Limited
Simmons, J. H.	Union Carriage & Wagon Company (Pty) Limited
Slome, B.	Television & Electrical Distributors (Pty) Limited
Smith, S. H. (Alternate)	Modern Engineering Works (Pty) Limited
Snell, A. L.	Barlows Heavy Engineering Limited
Streicher, P. E.	S.A. Manganese Amcor Limited
Temple, Dr. A. J.	McKechnie Bros. S.A. (Pty) Limited
Topper, B. G. A.	Haggie Rand Limited
Trotskie, J. deW.	Siemens Limited
van den Berg, A. J.	Industrial Development Corporation of South Africa Limited
van Wyk, W.	South African Iron & Steel Industrial Corporation Limited
Wearne, T. J. (Alternate)	Greenings (South Africa) (Pty) Limited
Webb, R.	Dorbyl Automotive Products (Pty) Limited
Webster, L. (Alternate)	Six Hundred Manufacturing (Pty) Limited
Weinerlein, A. V.	Hall Longmore Contractors Limited
Wentges, W. E.	Siemens Limited
Whitby, I. L.	Nordberg Manufacturing Company (S.A.) (Pty) Limited
Woodburn, Dr. T. L.	Winding Wires (Pty) Limited
Worthington, K. (Alternate)	Hawker Siddeley Africa (Machines) (Pty) Limited

CO-OPTED TO REPRESENT SEIFSA DIVISIONS:

Automotive Parts Manufacturing Division:	C. J. Beyleveld
Electrical, Electronics, Telecommunications and Allied Industries Division:	J. W. Nelson
Engineering Industries Division:	A. L. Snell
Foundry Industry Division:	J. T. Davies
Iron and Steel Division:	K. T. Brightman
Ferro Alloys Division:	P. E. Streicher
Manufacturing Industries Division:	S. W. Knobel
Plastics Industries Division:	P. F. S. King

President's address

Address of the President, Mr. R.T. Shaw, delivered to the Thirty-Seventh Annual General Meeting of the Steel and Engineering Industries Federation of South Africa, held in the Board Room, First Floor, Metal Industries House, 84 Marshall Street, Johannesburg, on Monday, 13th October, 1980 at 12 noon.



Last year, in his Address to the SEIFSA Annual General Meeting, my predecessor in office indicated that the SEIFSA group of industries was showing signs of slowly pulling out of the recession which had been a worldwide phenomenon for some 40 months.

Throughout my period of office improvements have been recorded in almost all our sectors, and mirror the Republic's economic upturn. General confidence has been engendered and this year's Budget has set the tone for economic revival, especially tax relief which has permeated, particularly, the consumer field. However, high inflation rates are cause for concern and reflect demand/pull symptoms. Our group of industries is now recording an improved thrust, investment in new plant and equipment, as well as beneficial spillover effects from infrastructural projects and from mining, transport, housing activites and certain key projects of national importance. Notwithstanding the economic upturn and shortages of labour in the skilled and semi-skilled areas, unemployment, particularly among the Black population groups in the metropolitan areas, persists. Inflation, although running at levels lower than those of some of our international trading partners, continues to erode living standards and places pressure on the value of individual and corporate savings and finances.

Of concern is the hardening of the commercial rand, which is impacting the earnings of our export oriented sectors and at the same time reducing the

effectiveness of the import displacement and replacement policy to which our industry is committed. Nonetheless some of our sectors continue to make strides in this area, but at lower levels when compared with the successes achieved last year.

In my opening remarks I referred to investment. This year SEIFSA again conducted its annual survey to establish trends in new capital investment in its various sectors. The following patterns which emerged are of interest.

New capital investment in the metal and engineering industries projected for 1980 totals R645 million, a 50,7% improvement over 1979. So far as the basic metal industries are concerned, which embrace the iron and steel industries, ferro-alloy, basic non-ferrous metals, steel pipe and tube sectors and the steel, iron and non-ferrous foundries, these will reflect an investment of R244 million, representing an improvement of 78,1% over the 1979 level.

The metal fabricating and engineering industries embracing the manufacture of fabricated metal products, machinery, electrical machinery and automotive components, project improved investment levels which reflect an increase of R401 million, an increase of 37,8% over 1979.

The main component of total new capital investments in our group, that is machinery, plant and equipment, will show an increase of R524 million in 1980 compared with R354 million last year.

Investments in new buildings so far as our group is concerned, including construction activities, will reflect an increase of 63,5%.

The trend which has developed over the past few years in the SEIFSA group of industries to enter into lease and lease-back buildings, machinery, plant and equipment and motor vehicles, increases. For 1980, an estimated R302 million in lease and lease-backs relate to land and buildings; R59 million to machinery, plant and equipment, and R42 million to motor vehicles.

Financing costs for new investment programmes and the existing financing of assets and working capital continue to remain relatively high. The incidence of corporate taxation and the financing of operations in a period of high inflation still reflects high gearing in many instances, and the continued practice of indulging in off-balance sheet financing as a countervailing device. Some economic commentators have expressed the view that a hardening of interest rates may occur and this will impact short and medium term corporate financing if this eventuates. Once again I must underscore that generally speaking the SEIFSA group of industries fall into the high capital intensive categories. Thus returns after tax must ensure that sufficient profits are generated, not only to give adequate returns on investment but to compensate for high risk factors in the types of activities in which our members are involved. Thus the generation of profits to enable their reinvestment for further productive pocesses is essential to ensure an incentive level which will continue to attract local and overseas funds, and for real growth to be achieved and to be sustained.

Some statistics on the SEIFSA group of industries would not be out of place. These reflect the contribution of our group to the Republic of South Africa and put in perspective the contribution which we make to the total economy.

The gross output of the metal and engineering industry sector of the economy is in excess of R10 000 million and constitutes some 33% of the total manufacturing output in the Republic.

With the economic upturn our work force of all population groups in our industries is now 510 000 people. Our labour force represents more than one-third of the total manpower engaged in all manufacturing activity throughout the Republic.

Last year our sectors exported products to the value of R1 200 million. Apart from ferro-alloys, pig iron and basic steel products, the bulk of our exports of manufactured goods is to the African continent, and meaningful penetration into many new international markets has been accomplished. The downturn in the economic fortunes of some of our trading partners is affecting our export performances and the hardening of the commercial rand is diminishing our export earnings.

During 1979 crude steel production was 8,9 million tonnes, up 12,3% on the 1978 figure; pig iron production was 7,0 million tonnes, up 18,6% on 1978, and ferro-alloy and silicon metals production was 1,6 million tonnes, up 40,3% on 1978.

During 1979 production of iron and steel castings was 666 700 tonnes, up 13% on 1978.

The non-ferrous foundries production was 30 480 tonnes, up 57,1% on 1978.

In the field of industrial relations negotiations with our workers this year saw the bringing into operation of new industrial agreements on the 1st July, 1980. These agreements will run and be effective until the 30th June, 1981. These contracts were negotiated with 10 trade unions under the aegis of the National Industrial Council for the Iron, Steel, Engineering and Metallurgical Industry and as in previous years, accredited Black workers' representatives also participated in the negotiations in terms of the procedures laid down in law. The wage increases constituted on an "across-the-board" basis were in a range from 14% in the higher and intermediate wage categories to 15% in the lower wage categories. Simultaneously fringe benefit agreements relating to the industry pension schemes were amended by providing for an additional 1% increase on employees' remuneration, payable both by employers and employees into the respective pension funds. This has enabled an increase in the basis of calculation of pensions to be effected, together with the provision of additional benefits with in-built guarantees concerning spouses of employees who die in service. Coincidentally with the new agreements, having regard to the acute shortage of skilled and semi-skilled

labour developing, a Metal and Engineering Industries Education and Training Co-ordinating Board has been established under the aegis of the Industrial Council, with objectives basically designed to plan, co-ordinate and advise on skills requirements for our group; set targets for recruitment and training; introduce new and update existing schemes providing means of training and retraining for all employees.

This body will also co-ordinate the various training schemes which are in operation in our group of industries, to give meaningful thrust to assist in overcoming our skills shortages.

All our industrial agreements contain no job discrimination features or colour bar connotations, and SEIFSA and its Associations continue to subscribe to and have reaffirmed the principles of the Urban Foundation Code of Employment Practice, which was jointly structured with the South African Employers' Consultative Committee on Labour Affairs (SACCOLA), of which SEIFSA is a member. As part of its commitment, SEIFSA members have responded by making known the progress which has been achieved in giving effect to the Code's Principles on a monitoring basis and which, together with other employer organisations, will be evaluated through the Institute of Labour Relations of the University of South Africa.

SEIFSA also is committed to the objectives and imperatives of "Manpower 2000" launched by the Honourable the Minister of Manpower Utilisation, and participates actively on the Main Committee, Executive Committee and regional sub-Committees established thereunder.

As indicative of our own interest in attempting to provide for skilled and semi-skilled labour, our existing Metal and Engineering Industries Education and Training Fund from September, 1971 to date has paid out grants to employers for the training of 19 520 persons in specified classes of labour amounting to R43,7 million.

Our SEIFSA Black Labour Unit continues to function satisfactorily with Black labour participation, as does our SEIFSA Communications Unit, which is making an effective contribution in promoting and improving industrial relations at the plant level between top management, supervisory management and various classes of other workers at all levels.

Through our collective bargaining processes and trade union co-operation, we continue to secure change and provide realignments in the technical occupational fields benefiting the total spectrum of our multinational labour force by continuously redefining job content and re-evaluating the skill components. Our technical job schedules are thus under continuous review and are being updated to emphasise the need for constant training and retraining to be undertaken, both institutionally and at the workplace, to meet technological change and social challenge.

It is of interest that during the year and through our Industrial Council mechanism we have made arrangements to enable Black trade unions to qualify for check-off facilities for trade union dues for their members in accordance with the procedures laid down in guidelines which we have issued. Last month two Black trade unions which became registered are now fully-fledged co-partners in our Industrial Council system and enjoy equal rights together with those of the other ten trade unions with which we deal. It is anticipated that further Black trade unions will on registration be admitted as co-partners to our Industrial Council system and our collective bargaining arrangements. The involvement of unionised Black workers in our Industrial Council system will hopefully ensure their members' aspirations will be accommodated within the framework of the industrial autonomy which is the cornerstone of our industrial relations philosophy together with our workers of the other population groups.

In concluding this Address I should like to record on your behalf our thanks to the Chairmen and members of:

The Economic Affairs Committee and its sub-Committees

The Technical Training Committee and its sub-Committees

SEIFSA Black Labour Affairs Central Committee and its sub-Committees

Metal and Engineeering Industries Education and Training Board

SEIFSA Industrial Relations and Communications Advisory Committee

for the excellent work they have done during the past year.

I should also like, on your behalf, to express my thanks to the Chairmen of the seven functional divisions of SEIFSA and to the Office Bearers and Executive Committees of our Constituent Associations for their specialist and time-consuming work on behalf of SEIFSA.

I should like to thank my Vice-Presidents and the members of the SEIFSA Board of Management and Council for their contribution to the work of the Federation during the year, and especially for their contributions during the recent lengthy labour negotiations.

I would like to express my personal thanks, as well as those of all of us, to the SEIFSA staff for their contribution towards the satisfactory running of the organisation. In particular I would like to make mention of Messrs. Badenhorst, Grotsius, Hanafey, Harris, Hodgkin, Pearce and Sullivan, and Messrs. Matthew, Potgieter, Roos and Tribe in our coastal operations, as well as our Director, Dr. E.P. Drummond.

Finally, may I congratulate the incoming President, Mr. L. Boyd, to be elected later today, and wish him a successful year of office on behalf of all of us.

I now have pleasure in moving the adoption of the Report of your Council for the year 1979/1980.

Report of the Council 1979/1980

ORGANISATION:

The Federation comprises 62 employer organisations, 57 of which have head offices in Johannesburg whilst five are administered from coastal centres.

No less than 393 companies were admitted to membership of the various constituent associations within the Federation during the year.

MEETINGS:

The Federation has experienced an exceptionally active year.

Apart from conferences and joint meetings with other organisations, a total of 606 meetings of the various interest within the Federation have taken place under its aegis.

The SEIFSA Council met on six occasions whilst the SEIFSA Board of Management held eleven meetings during the year under review.

Additionally, employer representatives and members of the permanent staff regularly attended meetings of the National Industrial Council and its committees both on the national and regional levels apart from the negotiations relating to the main agreement technical schedules and certain house and domestic agreements.

SEIFSA DIVISIONS:

The work of the Federation falls broadly under the following divisions:

1. **Administrative Division:**
   - Finance and accounts
   - Library
   - Publications
   - Public relations
   - Secretarial services to associations
   - SEIFSA Parliamentary liaison and legislation
2. **Labour Division:**
   - Industrial legislation and general labour relations and liaison
   - National Industrial Council liaison
   - Negotiation of industrial agreements and technical schedules
   - Participation on statutory bodies relating to labour matters
3. **Black Labour Unit:**
   - Black affairs administration
   - Black labour relations advisory and liaison services
   - Black wages and productivity
   - In-service training for Blacks
4. **Communications Unit:**
   - Industrial relations training, orientation and advice
5. **Technical Division:**
   - Liaison with:
     - S.A. Bureau of Standards
     - Council for Scientific and Industrial Research
     - National Productivity Institute
     - Pollution and the environment
     - Standards
     - Structuring of industrial agreement technical schedules
6. **Education and Training Division:**
   - Apprentice, technician and employee training
   - Careers guidance advisory service
   - Co-ordination of education and training
   - Administration of Metal and Engineering Industries Education and Training Fund
   - Liaison — Metal and Engineering Industries Education and Training Fund Supplementary Scheme
   - Recruitment and placement services
   - SEIFSA bursary awards administration
   - Administration of SEIFSA Technological Fund
7. **Economics Division:**
   - Customs tariff matters
   - Economic surveys related to the SEIFSA sectors of industry
   - Import and export matters
   - SEIFSA statistics
   - Special assignments and reports
   - Taxation
   - Tender and contract conditions
   - Transportation
8. **Funds Administration Division:**
   - Metal Industries Group Life and Provident Fund
   - Metal Industries Group Pension Fund
   - Metal Industries Medical Aid Fund
   - Sick Pay Fund for the Iron, Steel, Engineering and Metallurgical Industry (Schemes A and B)
   - Engineering and Allied Industries Employees Medical Aid Fund

ADMINISTRATIVE DIVISION

PUBLICATIONS:

When necessary, the membership of associations has been circularised on matters of special importance.

The monthly Bulletin continues to be a regular feature of the Federation's activities.

The 26th Edition of the "South African Metal Industries Directory and Handbook" was published during the year under review.

PUBLIC RELATIONS:

SEIFSA Banquet

The SEIFSA Banquet took place at the Carlton Hotel, Johannesburg on 24th October 1979.

The State President of the Republic of South Africa, Mr. Marais Viljoen D.M.S., was the guest of honour and addressed the Banquet, which was attended by 533 members and guests.

Annual Golf and Bowls Day

The Annual Golf Day for SEIFSA (Transvaal Division) members was held at the Royal Johannesburg and Huddle Park Golf Clubs on Monday, 3rd December, 1979, with no less than 444 golfers participating.

The Annual Bowls Day for SEIFSA (Transvaal Division) members was held at the Wanderers and Transvaal Automobile Clubs on the same day with 328 bowlers participating.

LEGISLATION:

The following measures were considered and representations made thereon where necessary:

- Laws on Co-operation and Development Bill, 1980
- Blacks (Urban Areas) Consolidation Act, 1945
- Promotion of the Economic Development of Black States Act, 1968
- Income Tax Amendment Bill, 1980
- Physical Planning Bill
- Physical Planning and Utilisation of Resources Amendment Act, 1975
- Environment Planning Amendment Act, 1977
- Sales Tax Amendment Bill
- National Key Points Bill
- Public Holidays Amendment Act
- Maintenance and Promotion of Competition Act, 1979
- Copyright Amendment Bill
- Trade Practices Amendment Bill
- Republic of South Africa Constitution Act
- Industrial Conciliation Amendment Bill
- Road Transportation Amendment Bill
- Industrial Development Amendment Bill
- Electricity Amendment Bill
- Taxation of Blacks Amendment Bill
- Companies Amendment Bill

PARLIAMENTARY REPRESENTATION:

The arrangement whereby parliamentary representation is handled through SEIFSA (Cape Division) continues to function most satisfactorily.

NON-FERROUS AND FERROUS CONTROL:

Liaison is maintained with the Department of Industries on the operation of the aforegoing measure.

SEIFSA LIAISON OFFICER:

The Liaison Officer on the SEIFSA staff continues to afford valuable contact between the Federation and firms, members of its constituent associations.

LIAISON WITH GOVERNMENT DEPARTMENTS:

The Federation maintains effective liaison with the various government departments concerning matters of mutual interest.

NATIONAL DEVELOPMENT AND MANAGEMENT FOUNDATION OF SOUTH AFRICA:

SEIFSA continues to be a member of the above Foundation.

SOUTH AFRICAN BRITAIN TRADE ASSOCIATION LIMITED:

SEIFSA continues to be represented on the Council of the above organisation.

LABOUR DIVISION

NATIONAL INDUSTRIAL COUNCIL:

The following national group committees operate within the Council:

- — Automotive Parts Manufacturing Group
- — Electrical, Electronics, Telecommunication and Allied Industries Group
- — Engineering Industries Group
- — Ferro Alloys Group
- — Foundry Industries Group
- — Iron and Steel Group
- — Miscellaneous Manufacturing Industries Group
- — Plastics Industries Group

These group committees are constituted for the purpose of determining technical issues arising from the operation of the various agreements and to co-ordinate employer and trade union viewpoints in relation to demarcation issues.

Meetings of certain of the group committees were held during the past year. The Executive Committee of the National Industrial Council has met regularly, as have the Regional Councils in the following areas:

Border	Natal
Cape	O.F.S. and Northern Cape
Midlands	Transvaal

INDUSTRIAL AGREEMENTS:

The Main Agreement:

Amendments to the main agreement for the industry were negotiated and became effective from 1st July, 1980.

The amendments comprised increases to the scheduled minimum wage rates of the main agreement together with guaranteed wage increases to all employees and increased holiday bonus payments. The allowances paid to employees required to live away from their domiciles were also increased.

The provisions of the Agreement were also amended to provide for the deduction of payment for board and lodging provided by the employer to be determined on a mutually agreed basis.

The main Agreement is current for one year and will expire on 30th June, 1981.

Accredited Black representatives of the Black workers in the industry continue to play an important role in the negotiation procedures in terms of the Black Labour Relations Regulation Act, together with officials of the Central Black Labour Board.

Other Industrial Agreements:

Agreements and/or specific conditions of employment relating to the following undertakings are current:

- Alusaf (Pty) Limited
- Ferro Alloy Producers' Association on behalf of specified companies
- Highveld Steel & Vanadium Corporation Limited
- Huletts Aluminium of South Africa Limited:
  - Pietermaritzburg, Olifantsfontein and Epping
- ISCOR
- ISPA sub-Group
- Lift Engineering Industry (Servicing and Installation)
- Radio Manufacturing Industry
- Radio, Refrigeration and Domestic Electrical Appliances Servicing Establishments (Transvaal)
- Transalloys Limited
- Union Steel Corporation (of South Africa) Limited Group of Companies

The agreements are generally in line with the main agreement's conditions of employment.

Negotiation of certain "house" agreements affecting companies in the ferro alloy industry has been delayed due to problems of trade union acceptance of work evaluation methods.

The Journeyman Recognition Agreement:

The agreement applies to all establishments (party and non-party) and provides for prescribed training of participants in the scheme. Employers of persons qualifying as journeymen under the Journeyman Recognition Scheme receive grants from the Metal and Engineering Industries Education and Training Fund.

Since the inception of the Journeyman Recognition Scheme in 1965 more than 12 500 journeyman recognition contracts and certificates have been issued. The scheme continues to provide a means to alleviate the shortage of skilled artisans and in upgrading operative classes of labour to higher skills in the artisan trades.

The following Industrial Agreements are current:

- Metal Industries Group Life and Provident Fund Agreement
- Metal Industries Group Pension Fund Agreement
- Metal Industries Medical Aid Fund Agreement
- Engineering and Allied Industries Employees' Medical Aid Fund Agreement
- Sick Pay Fund Agreement for the Iron, Steel, Engineering and Metallurgical Industry

With effect from 1st July, 1980, the employer and employee contributions to the Metal Industries Group Life and Provident Fund and the Metal Industries Group Pension Fund were increased from 5% to 6% of pensionable remuneration. Contributions were also increased during the year under both the Medical Aid Fund Agreements.

Metal Industries Artisan Training Agreement:

This new agreement, applicable only in party establishments, has been negotiated to provide a further means of training artisans in the industries in accordance with the basic work content of apprentice training schedules.

The agreement currently provides for training in the trades of Plater, Plater/Boilermaker, Fitter and Turner. The entry age of persons accepted for training has been reduced from 21 years to 20 years.

Employers of persons qualifying as artisans under this agreement qualify for grants under the Metal and Engineering Industries Education and Training Fund.

Administration Expenses of the National Industrial Council:

The agreement which provides for employer and employee contributions to defray the expenses of the National Industrial Council remains current.

SEIFSA Technological Fund Agreement, Metal and Engineering Industries Education and Training Fund Agreement and Supplementary Scheme Agreement:

These aforegoing agreements are still current. The training fund agreements provide for the collection of levies from employers and for the payment of grants to employers who provide training and retraining facilities registered with and approved by the Board of Management of the Fund.

During the past year contributions to the Education and Training Fund were increased by 50% with a similar increase in certain grants payable by the Fund.

The levy provisions of the Fund are currently under review with a view to increasing the numbers of persons trained and retrained and enhancing grant payments.

The SEIFSA Technological Fund agreement was amended in July, 1980 to provide for increased contributions, being the first increase since its inception in 1963.

SOUTH AFRICAN EMPLOYERS' CONSULTATIVE COMMITTEE ON LABOUR AFFAIRS:

SEIFSA continues as a member of the above Committee which deals with national and international labour affairs. The Committee has authorised the Institute of Labour Relations of the University of South Africa to monitor the implementation of the SACCOLA/Urban Foundation Code of Employment Practice to which SEIFSA is committed.

INSTITUTE OF LABOUR RELATIONS — UNISA:

SEIFSA is a member of the Institute of Labour Relations of the University of South Africa. SEIFSA is also represented on the Board of Management and on the Projects Committee of the Institute.

INSTITUTE FOR INDUSTRIAL RELATIONS:

SEIFSA is a member of the Institute.

NATIONAL INDUSTRIAL COUNCIL — LABOUR CONTROL COMMITTEE:

The Committee continues to meet regularly to administer the Metal Industries Artisan Training Scheme which provides for modular training in a limited number of trades. To date already more than 100 contracts have been issued under the scheme.

MOTOR AND ENGINEERING INDUSTRIAL COUNCILS:

The National Demarcation Liaison Committee which operates to determine demarcation issues arising between the two industries has met regularly during the past year. The Committee is currently reviewing the demarcation principles in use to ensure continued co-operation between the Councils.

BUILDING AND ENGINEERING INDUSTRIAL COUNCILS:

The Demarcation Committee of the two Councils, which has been suspended for the past eight years, has been resuscitated and the first meeting was held in August, 1980. A sub-Committee of the two Councils has been formed to prepare demarcation principles for consideration by the main Committee.

FURNITURE AND ENGINEERING INDUSTRIAL COUNCILS:

The joint Demarcation Liaison Committee of the respective Councils in the Transvaal is still extant although no meetings of the Committee were necessary during the past year.

MANPOWER BOARD:

SEIFSA is represented on the Board which is constituted under the Defence Act.

NATIONAL OCCUPATIONAL SAFETY ASSOCIATION:

SEIFSA collaborates closely with the Association and is represented on its Board of Directors and on regional committees.

UNEMPLOYMENT INSURANCE BOARD:

SEIFSA is represented on the Board, which continues to meet monthly to monitor and control the administration procedures of the Unemployment Insurance Act and to make recommendations for amendments to the Act. The definition of a contributor was amended with effect from 1st January, 1980 by the raising of the ceiling on earnings to R9 600 per annum.

CHAMBER OF MINES AND ENGINEERING INDUSTRY:

Liaison between the Chamber of Mines and SEIFSA continues and close co-operation is maintained on labour matters.

SEIFSA — ORGANISATIONAL STRUCTURE:

Functional divisions of SEIFSA were established to improve communication between the individual associations and the SEIFSA Board of Management and Council.

The divisions concerned are:

1. Automotive Parts Manufacturing Division
2. Electrical, Electronics, Telecommunication and Allied Industries Division
3. Engineering Industries Division
4. Ferro Alloy Industries Division
5. Foundry Industry Division
6. Iron and Steel Division
7. Manufacturing Industries Division
8. Plastics Industries Division

Chairmen of the functional divisions have been co-opted to the SEIFSA Board of Management and Council to ensure co-ordination of the liaison procedures.

DEFENCE LIAISON COMMITTEE:

SEIFSA is represented on the Committee which has been established to ensure liaison between major employer organisations and the S.A. Defence Force. The Committee has met regularly during the year and provides a valuable forum for the resolution of problems affecting the Defence Force and the private sector.

Liaison was maintained with the Defence authorities with a view to attracting national servicemen who have completed their training periods into the metal and engineering industries in various work categories. SEIFSA is represented on many of the local committees which have been established to ensure that demobilised servicemen have adequate employment opportunities on return to civilian life. The employment placement services of the National Industrial Council have played a role in this exercise.

COMMISSION OF INQUIRY INTO LABOUR LEGISLATION (WIEHAHN COMMISSION):

This Commission, which was appointed to enquire into all aspects of labour measures administered by the Departments of Manpower Utilisation and of Mines, has now issued two reports dealing with —

(a) Key Issues, and
(b) Training.

Further reports from the Commission are expected in the near future.

NATIONAL MANPOWER COMMISSION:

The Commission which was set up by Government on the recommendation of the Wiehahn Commission of Inquiry has been structured with an Executive Committee and various standing committees with specific terms of reference.

The main areas to which the Commission is directing attention are manpower development, manpower utilisation and manpower maintenance.

SEIFSA is represented on the Commission, its Executive Committee and on certain of the standing committees.

In June, 1980 the SEIFSA Council received an address by the Chairman of the National Manpower Commission, Dr. H.J.J. Reynders, on the working of the Commission, its objectives, targets and work programmes.

"MANPOWER 2000":

The Minister of Manpower Utilisation has launched a country-wide awareness campaign to emphasise the need for fully utilising the country's manpower assets and to develop and preserve those assets.

SEIFSA is represented on the National Committee, Executive Committee and Regional Committees promoting the campaign.

BLACK LABOUR UNIT

INDUSTRIAL RELATIONS:

Requests from member companies for in-company consultations with the Unit on the evaluation within their organisations of their management/employee communication systems and procedures have continued to be received. Management awareness of their responsibilities in the field of industrial/labour relations has increased and requests for orientation presentations for management groups at individual plant level have been received on a regular basis during the past year with a view to reorganising existing communication structures to meet the needs of current developments in the field of industrial relations.

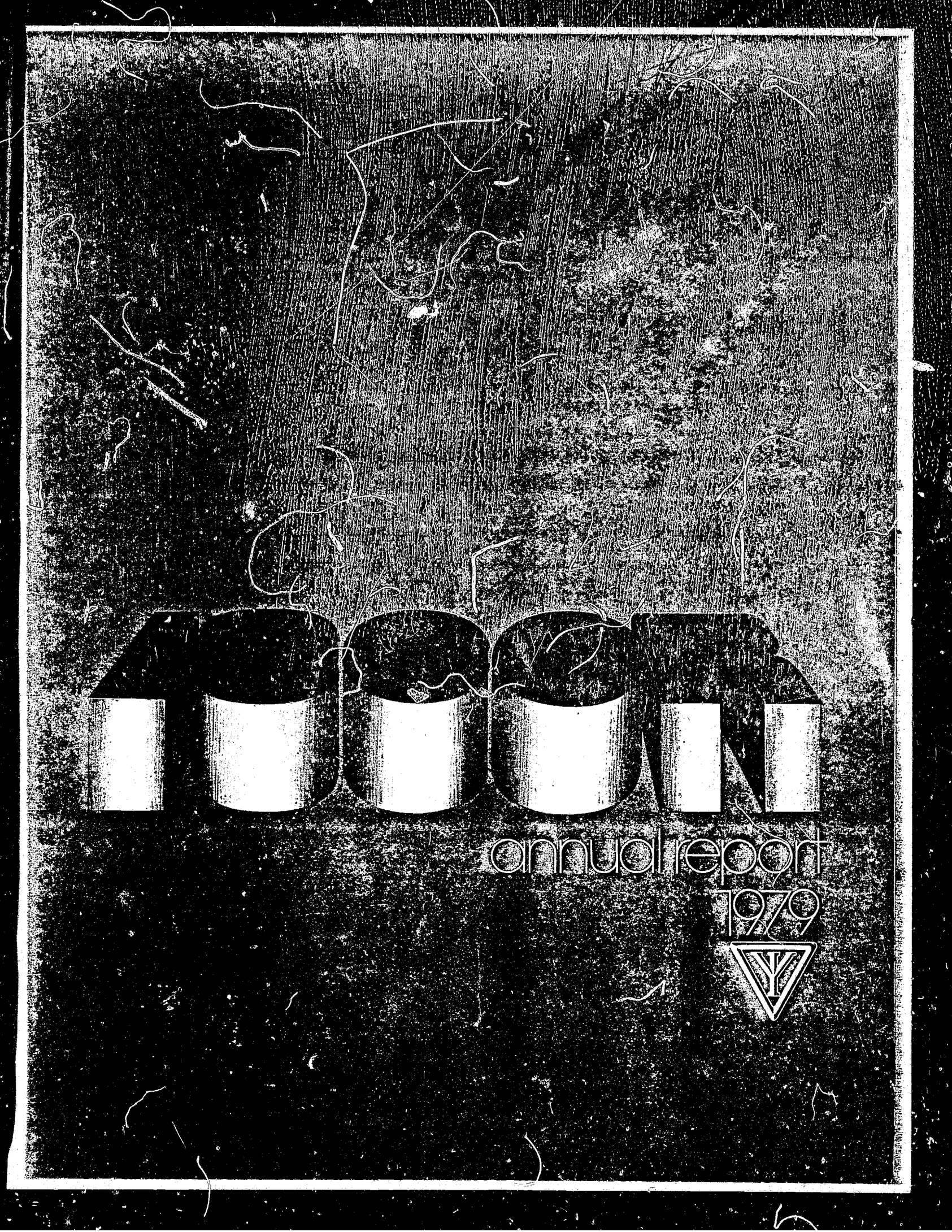
The SEIFSA Black Liaison Officers have participated at certain consultations in order to give appropriate advice on effective communication systems with Black employees to meet the particular domestic situations of individual companies.

BLACK TRADE UNION DEVELOPMENT AND PARTICIPATION:

Following the promulgation of the Industrial Conciliation Amendment Act, 1979, Black trade unions which were not formerly registerable could, from 1st October, 1979, apply for registration in terms of the Industrial Conciliation Act and on obtaining such registration make application to become parties to Industrial Councils. The Federation accordingly published guidelines on the development and participation of Black trade unions on the 13th November, 1979, along with subsequent guidelines mainly concerning the granting of special stop-order facilities for Black trade unions which had not yet obtained registration but which had complied with certain criteria embodied in the guidelines and as approved by the National Industrial Council. The special stop-order facilities were initiated following consultation between the trade union and employer parties to the National Industrial Council and subsequent approval by the Council.

During the period 14th January, 1980 to 14th February, 1980 the SEIFSA Black Labour Unit conducted regional management orientation presentations throughout the Republic for the purpose of further explaining the standpoints contained in the guidelines.

Some unrest leading to dispute situations and sporadic work stoppages occurred in certain regions of the Republic involving SEIFSA member companies, mainly in the PWV area of the Transvaal and the Eastern Cape and Cape Midlands areas. These occurrences generated more interest among employers in developing Black trade unions, resulting in requests for advice and consultation by individual member companies.


annual report
1979

South African Iron and Steel Industrial Corporation, Limited

(Constituted and incorporated by Act of Parliament in the Republic of South Africa)

Board of Directors	Dr. T. F. Muller, Chairman Dr. J. P. Coetzee Prof. D. G. Franzsen Mr. P. K. Hoogendyk Dr. J. P. Kearney Mr. J. J. Kitshoff Dr. M. D. Marais Prof. H. J. Samuels Mr. J. J. Vermooten

General Manager	Mr. K. R. Rümelin
Divisional General Managers —	
Mining	Mr. M. J. Deats
Supplies	Mr. L. Duncker
Steel Operations	Mr. F. P. Kotzee
Steel Marketing	Mr. P. A. Olivier
Mining Products Marketing	Mr. P. J. C. Pretorius
Planning and New Development	Mr. K. Prince
Finance and Business Services	Mr. L. van Zyl

(Hierdie verslag is ook in Afrikaans beskikbaar)

Notices of Annual General Meetings

Annual General Meeting of Private Shareholders

Notice is hereby given that the Annual General Meeting of Private Shareholders (holders of B shares or preference shares) of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, on Wednesday, 28 November 1979, at 09h00, for the following business:

1. To nominate an auditor in accordance with Section 14(1) of Act No. 11 of 1928, as amended.

2. To elect one director in terms of Section 3(1) (b) of Act No. 11 of 1928, as amended.

Proxies must be deposited at the Headquarters of the Corporation not less than forty-eight hours before the meeting.

Iscor Headquarters
P.O. Box 450
Pretoria 0001

30 October 1979

By order of the Board
A. C. Greyling
Group Secretary

Fiftieth Annual General Meeting of Shareholders

Notice is hereby given that immediately after the Annual General Meeting of Private Shareholders convened for 09h00 on Wednesday, 28 November 1979, the Annual General Meeting of Shareholders of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, for the following business:

1. To receive the annual financial statements of the Corporation for the financial year ended 30 June 1979.

2. To transact such other business as may be transacted at an annual general meeting of the Corporation.

Proxies must be deposited at the Headquarters of the Corporation not less than forty-eight hours before the meeting.

Iscor Headquarters
P.O. Box 450
Pretoria 0001

30 October 1979

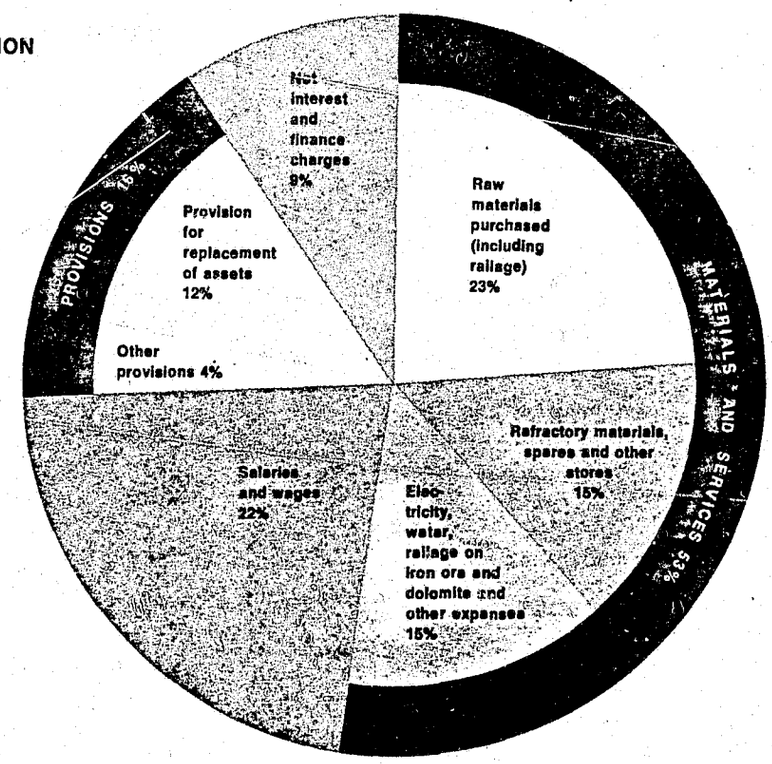
By order of the Board
A. C. Greyling
Group Secretary

At a Glance

(Figures rounded off to nearest thousand)	1978/79	1977/78
Liquid steel production	**6 680 000 tons**	6 218 000 tons
Prime steel products sold	**4 692 000 tons**	4 406 000 tons
Net sales revenue (all products)	**R1 415 548 000**	R1 133 585 000
Gross trading profit	**R 191 961 000**	R 59 480 000
Reserve for increased replacement cost of fixed assets	**98 471 000**	79 657 000
Net trading profit/(loss)	**93 490 000**	(20 177 000)
Other income	**9 745 000**	10 699 000
	103 235 000	(9 478 000)
Financing charges	**141 445 000**	63 769 000
Net loss for year	**R 38 210 000**	R 73 247 000*
Capital expenditure — during year	**R 61 353 000**	R 94 113 000
Fixed assets (net value) — at year-end		
— in production	**R1 746 127 000**	R1 771 661 000
— under construction	**93 675 000**	109 154 000
	R1 839 802 000	R1 880 815 000
Source of funds employed		
— shareholders' interest	**R1 229 547 000**	R1 064 319 000
— fixed period loans	**1 748 716 000**	1 956 434 000
	R2 978 263 000	R3 020 753 000

* After a Government contribution of R70 million to financing charges in 1977/78.

PERCENTAGE DISTRIBUTION OF TOTAL COST: 1978/79


Net interest and finance charges 9%
Raw materials purchased (including railage) 23%
MATERIALS AND SERVICES 53%
Refractory materials, spares and other stores 15%
Electricity, water, railage on iron ore and dolomite and other expenses 15%
Salaries and wages 22%
PROVISIONS 13%
Provision for replacement of assets 12%
Other provisions 4%

Statement by the Chairman

TO THE SHAREHOLDERS

In my statements over the past few years I had to paint a very gloomy picture of the world steel industry. Although a slight improvement in this state of affairs has become noticeable, satisfactory profits are still the exception rather than the rule, and steel producers in numerous countries are still suffering losses. Such a situation certainly cannot be tolerated indefinitely and it appears inevitable that fairly substantial increases in steel prices will have to be considered throughout the world.

With regard to the South African economy, it is gratifying that a modest but nevertheless reasonably steady growth became evident during the year, and a more favourable year ahead is confidently expected.

Last year mention was made of the specific problems facing Iscor, and aspects such as the Corporation's high debt ratio, poor market conditions, inadequate price adjustments and raw material and labour difficulties were discussed. Against this background the then Minister of Economic Affairs directed that a committee of enquiry be established under the chairmanship of the Secretary for Industries to ascertain what further steps would be required to overcome Iscor's particular problems and to examine related aspects. This committee, composed of senior civil servants and members of Iscor management and known as the Theron Committee, tabled its report in the House of Assembly during June 1979, and I will refer to the major findings contained in that report.

The discussion to follow will indicate to what extent changed circumstances and sustained efforts have contributed towards improving matters and finding solutions in the different problem areas, but at this stage the following two findings of the Theron Committee should suffice:

— "Iscor has made relatively good progress on the road to recovery and a return to profitability.

— Iscor's debt ratio is improving rapidly and, subject to certain assumptions, an acceptable level may already be reached by 1981/82."

OPERATING RESULTS

The turnover for the year rose by 25 per cent to R1 636 million (1978: R1 309 million), whilst the loss of R73,2 million for 1978 was reduced to R38,2 million for this financial year. This latest loss figure should be seen against the background that the Government did not, as in the previous year, make a contribution to financing charges. Taking into account that this Government contribution for the previous year amounted to R70 million, an improvement of R105 million is reflected in the results for the year under review.

This favourable turn in financial results assumes greater significance if it is noted how matters improved as the year progressed; the second half-year actually showed a profit of R20 million as against a loss of R58 million for the first half-year. Iscor is therefore indeed on the road to recovery, and the possibility of a net profit for the 1979/80 financial year is not excluded.

FINANCING

Last year, concern was expressed at the unrealistically high debt ratio which then amounted to 64,8 per cent and the accompanying high interest burden.

During the year under review advantage was taken of the high liquidity position, which prevailed practically world-wide, to reduce interest costs and to consolidate the loan burden by making greater use of longer term as well as local loans. Consequently no problems are foreseen in meeting the requirements of Iscor's existing redemption programme.

Despite the net loss for the financial year and the need for additional operating capital of R64 million, it was possible to reduce the debt burden by an amount of R208 million and the debt ratio to 58,7 per cent. The source of these funds consisted mainly of R201 million in replacement provisions and an additional capital injection of R105 million. Iscor's conservative policy regarding the provision for replacement of assets has once again contributed to a positive internal cash flow. In fact, a positive internal cash flow has constantly been maintained, even during the years in which losses have occurred.

The Theron Committee agreed that the rate at which profitability and balance-sheet ratios will recover, will depend primarily on the recovery in the local demand for steel. It confirmed that, subject to certain assumptions regarding this primary requirement and certain further provisos, the Government will be able to discontinue the contribution of additional share capital within the next few years and that profitability should recover to such an extent that it seems possible that dividend payments will be resumed within the foreseeable future.

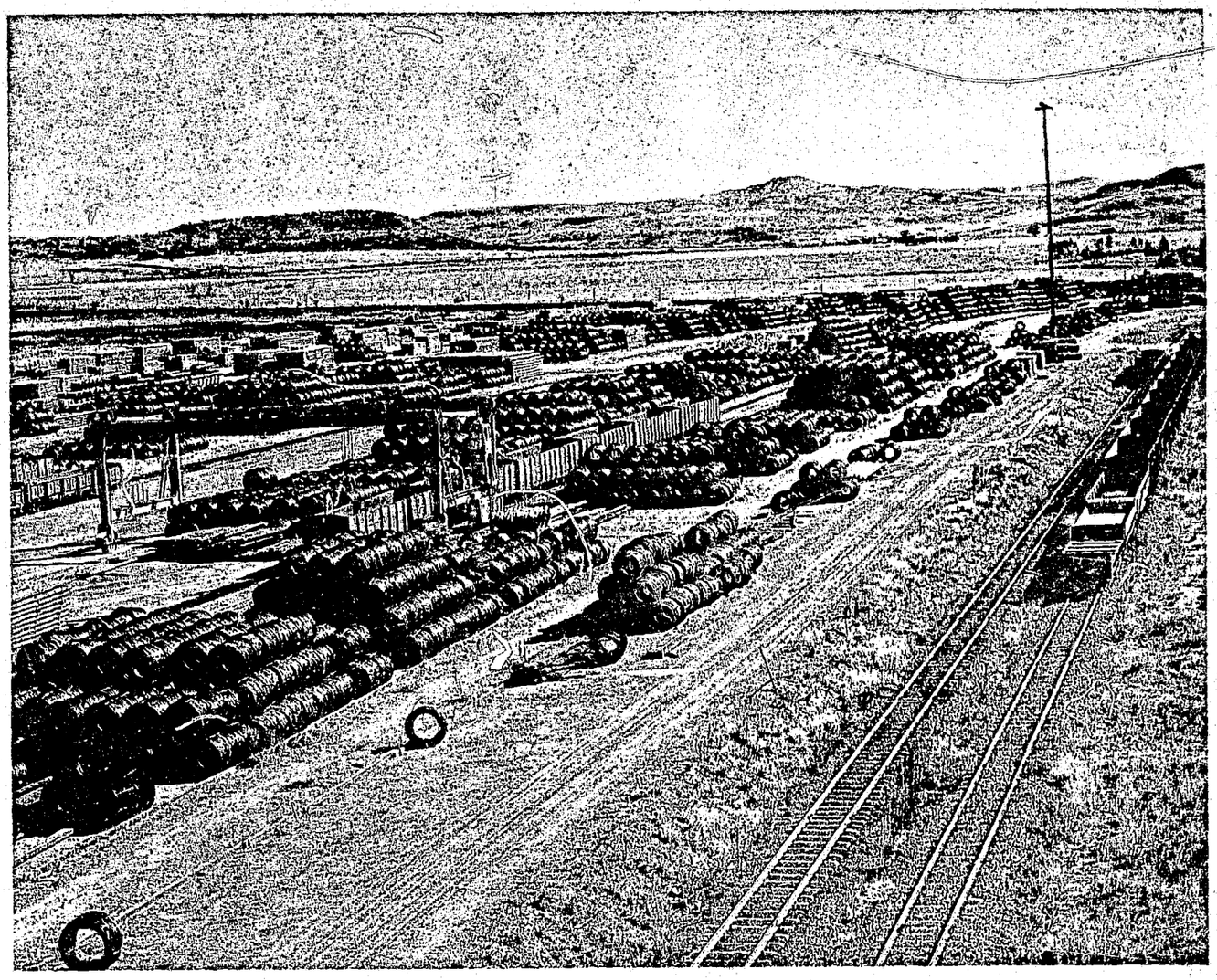
Capital expenditure during the year amounted to R61 million, which was used mainly for development of the Grootegeluk coal mine and equipment for the Sishen mine.

STEEL PRICES

A further problem area referred to last year was that, for almost two decades, adjustments in the controlled price of steel had not fully compensated for the increases in input costs. It was pointed out that the Government, in line with its policy of giving priority to the combating of inflation, had not only been prepared to waive dividends on its share investment but allowed Iscor to show losses rather than grant steel price increases commensurate with increases in input costs. In this regard it is important that the Theron Committee confirmed that:

— "Regular price adjustments to make up in full for unavoidable cost increases in respect of its production inputs are a prerequisite for a sound financial structure at Iscor."

Prices of iron and steel products were increased by an average of 10 per cent during September 1978 and by 12,2 per cent in June 1979. These average increases, like those in the past, were again applied on a differentiated basis.



Stacks of wire rod and billets, destined for export, ready to be railed from the Newcastle Works to the coast.

IRON AND STEEL PRODUCTION

Total liquid iron production for the year was 5,7 million tons, representing an improvement of 11 per cent on the figure for the previous year. Record production was achieved at both the Pretoria and Vanderbijlpark blast furnaces as a result of a limited improvement in coke quality and optimization of certain operating practices. The largest blast furnace at the Newcastle Works still did not operate satisfactorily during the first half of the year, but since January 1979 operating problems have been gradually eliminated and prospects for this unit now appear to be brighter.

The greater availability of liquid iron, coupled with higher production rates at the electric-arc furnaces, resulted in a total liquid steel production of 6,7 million tons. This exceeds the previous year's production by more than 7 per cent.

Technological improvements resulted in the design capacities of continuous casting machines being exceeded at both the Vanderbijlpark and Newcastle Works. This achievement is of particular importance, especially at the latter works where continuous-casting capacity is a bottleneck.

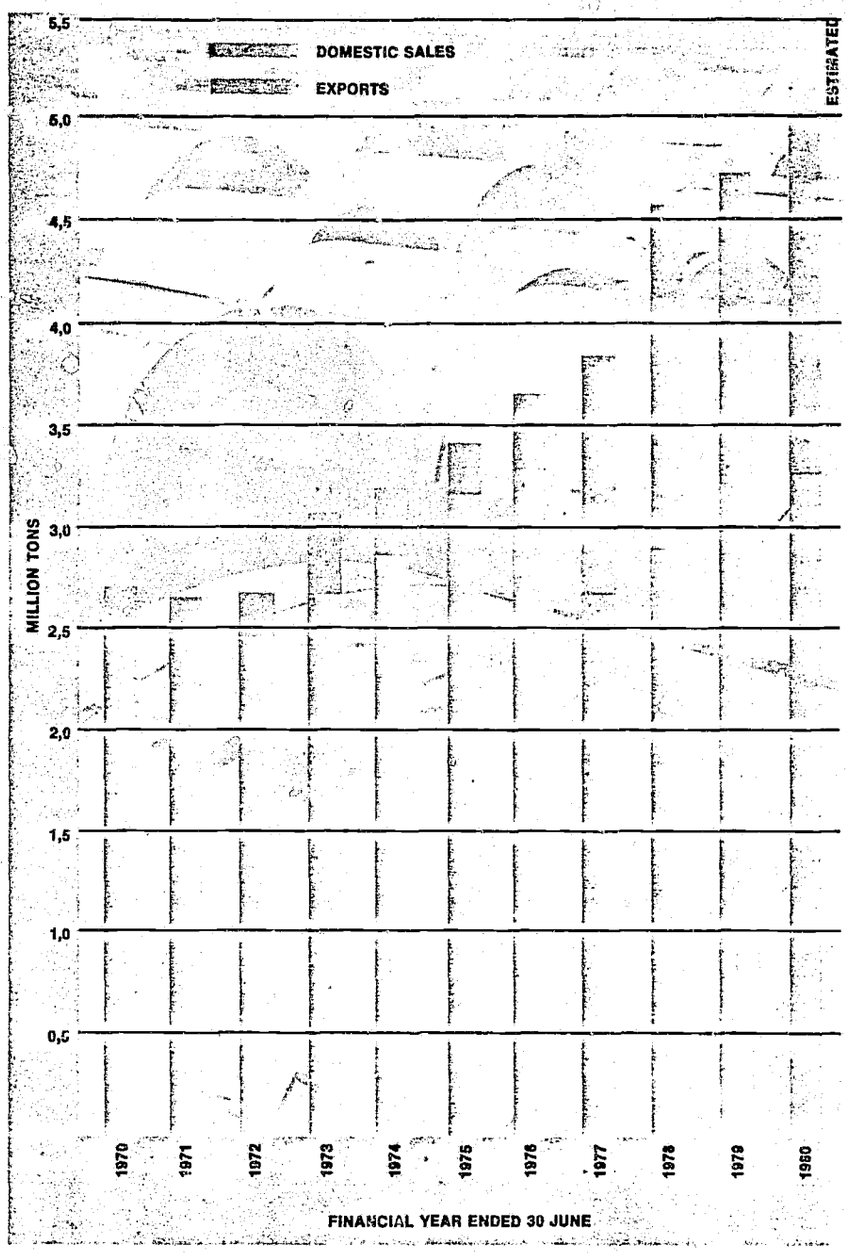
The problem of under-utilization of rolling facilities, due to imbalances between metallurgical and mills capacities, will remain until such time as the availability of liquid iron can be further increased. Iscor's long-term plan includes various steps to increase the production of existing blast furnaces, but all these steps require capital expenditure and will only be put into effect over the medium to long term.

Meanwhile, however, profitability is being detrimentally affected and the cost involved in this unutilized capacity (excluding interest on capital) amounted to approximately R90 million for the year under review.

PRODUCTIVITY

The Corporation has continued to experience sustained improvement in labour productivity, material yields and plant utilization. In addition to its own productivity measurements employed in the past, Iscor also made use of the services of the National Productivity Institute in the year under review. Productivity over the past three financial years was measured according to the methods used by that body and it was found that an overall productivity improvement (labour, materials and capital) of approximately 5 per cent per annum, in real terms, had been maintained over this period.

SALES OF ISCOR STEEL PRODUCTS



STEEL SALES

During the year 4,7 million tons of steel products were sold, which is 6 per cent more than the 4,4 million tons for the previous financial year. Domestic sales were 2,9 million tons (1978: 2,8 million tons), whilst 1,8 million tons were exported (1978: 1,6 million tons).

Domestic Demand

The relatively poor domestic demand of the previous year continued during the first part of the financial year. Later in the year there was a marked revival in most steel consuming sectors, and indications are that these improved conditions will prevail at least to the end of 1979, and most likely to the end of the 1979/80 financial year.

Steel Exports

Reference was made earlier to the slight improvement in the international steel market during 1978. However, there are already indications of a drop in demand in the USA, whilst no appreciable improvement is anticipated in the EEC countries.

In general, better prices were obtained in export markets than during the previous year, but a levelling-out is occurring at present, and the poor demand conditions predicted for 1980 indicate less favourable export prices.

One of the problem areas mentioned last year was the large export tonnages with resultant lower earnings. On the one hand there are the much higher consignment and storage costs, and on the other hand there are the keen, competitive prices ruling on the export market. The effect of this is reflected in the fact that if the 1,8 million tons of steel products exported during the financial year (to as many as 55 countries) could have been sold locally, it would have meant an additional income to Iscor of approximately R200 million. It is budgeted that 1,83 million tons will have to be exported during the 1979/80 financial year.

However, these steel exports have made a considerable contribution to the favourable swing in the Republic's balance of trade. In respect of the 1978 calendar year, the Corporation's steel exports contributed R325 million to the country's favourable balance of trade, while as recently as 1975, when the Republic showed a trade deficit of R1 560 million, nearly 1 million tons of steel had to be *imported* at a cost of R270 million.

To rail and ship the exceptionally high export volumes, it was necessary to utilize the existing infrastructure to the utmost, and the co-operation of the SAR & H in this matter was excellent.

IRON ORE EXPORTS

Reference was made last year to the negative influence exercised by the depressed conditions in the world steel industry on the demand for, and price of, iron ore, while mining and transport costs continued to rise. The situation has not changed materially and only a slight growth in the world blast-furnace production is being experienced. This, together with the international pressure on steel prices and the present ore supply position, resulted in the iron ore market not yet having recovered to the extent that ore exports yield an adequate return on investment.

Iscor has nevertheless succeeded in having Sishen ore firmly established in the world market and is accepted as a reliable supplier of consistently good quality. During the financial year, 14,2 million tons of ore were shipped, compared with 12,6 million tons in the previous year. Ore shipments for the year earned R181 million in foreign exchange, whilst the total f.o.b. value of the 34 million tons

exported since the commencement of the export scheme in September 1976, amounts to R428 million.

Electrification of the entire Sishen-Saldanha railway line has been completed, thus bringing about a considerable saving of diesel fuel. It is important also that the future cost of ore transportation over this line will not be subject to fluctuations in the price of petroleum fuel.

RAW MATERIAL SUPPLY

Coal

Of the more than 6 million tons of coal consumed during the year, about 75 per cent was purchased, whilst the remainder was supplied by Iscor's Durnacol mine. As during the previous year, the increase in the purchase price of coal was about 16 per cent.

The Corporation's own coal-mining activities at the Durnacol mine were satisfactory. The development of the Grootegeluk project and the establishment of the accompanying infrastructure are proceeding according to plan and the mine is intended to be commissioned by the middle of 1980. The possible construction of an Escom power station at Ellisras is of great importance, since it will provide an outlet for the considerable tonnage of Grootegeluk middlings.

Last year reference was made to the development of a box-cut in the Soutpansberg coal-field in order to obtain a large coal sample and to determine mining methods. The analysis of this coal sample has indicated that considerable work and tests in connection with blending and coking properties will still have to be done and that further large-scale sampling is necessary. It will therefore be about another year before reliable indications can be obtained of the real potential of this coal-field as a source of good coking coal.

Iron Ore

In addition to the export tonnage (14,2 million) from Sishen, more than 8 million tons of iron ore from the Sishen and Thabazimbi mines were supplied to the three Iscor works during the year.

Extensive drilling and exploration programmes are being carried out at both mines to ensure accurate determinations of the ore reserves, thus also facilitating pit planning for long-term exploitation.

Other Raw Materials

During the year Iscor again derived substantial financial benefits from the self-supply of approximately 65 per cent of its tin requirements, whilst the successful mining of zinc, dolomite and silica stone for its own needs was also continued.

PERSONNEL

Mention must again be made of the problem of employee shortages in certain professional categories. During the year under review these shortages were experienced to an increasing extent and should be looked upon as part of a serious national problem. In fact, the loss of trained employees to other employers leaves the Corporation in a manpower supply position which, if it should persist, could restrict activities even in the short term.

As in the past, the Corporation again played its part in training. In addition to the approximately 4 000 apprentices registered at the Corporation's training centres, 274 Iscor bursary holders studied at South African universities, and provision is now also made for bursaries to be awarded for study in the pure sciences. The system under which pupil engineers are trained at the Vanderbijlpark Works in conjunction with the Potchefstroom University, has now been extended to the Pretoria Works in conjunction with the University of Pretoria. Technical institutes and training centres for trades have been established and hostels erected also at the smaller Iscor centres, so that still more artisans can be trained. However, since the shortages in these labour categories occur country-wide, all these efforts by Iscor by no means imply that the expertise which it is helping to create is being retained; the loss suffered through the exceptionally high labour turnover cannot be expressed in figures.

FUEL CONSERVATION

In the light of the prevailing fuel crisis and as a result of the request by the Minister of Industries and of Commerce and Consumer Affairs, serious attention was given to the maximum saving of petroleum products, even at a limited increase in operating costs.

Short-term measures since February 1979 have already resulted in considerable savings, whilst further drastic measures are being planned to replace diesel-driven equipment by equipment employing other sources of energy, particularly at Sishen and Grootegeluk.

SUBSIDIARY AND ASSOCIATED COMPANIES

On 29 June 1979 an agreement was entered into with Metkor Investments Limited, in terms of which the Corporation exchanged its 50 per cent shareholding in Air Products South Africa (Proprietary) Limited for the 3,93 per cent shareholding of Metkor Investments Limited in SA Manganese Amcor Limited, as from 30 September 1979.

Since the end of the financial year, the Corporation's equity in Metkor Investments Limited dropped to 43,8 per cent, as the Corporation decided not to exercise its rights in respect of that company's rights issue of convertible vote-carrying preference shares to existing shareholders. In this manner the private sector has also substantially increased its shareholding in Metkor.

No material changes occurred during the year in respect of the Corporation's remaining interests in its subsidiary and associated companies.

DIRECTORATE AND MANAGEMENT

There was no change in the Board of Directors during the year. I would like to express my appreciation to my co-directors for their valued support and co-operation.

In my previous statement I already mentioned that Dr. J. P. Coetzee retired on 30 September 1978 as Managing Director, but that he was staying on as a director. I wish to record my gratitude and appreciation to him, to the General Manager, Mr. K. R. Rümelin, and to members of management as well as all other employees for their dedicated and loyal service during the year.

At the forthcoming annual general meeting I shall move that the annual financial statements, as submitted, be approved and adopted and that all things undertaken and performed on behalf of the Corporation, be confirmed.

T. F. MULLER
Chairman

Pretoria
30 October 1979

SOUTH AFRICAN IRON AND STEEL INDUSTRIAL CORPORATION, LIMITED

Annual Financial Statements

for the year ended 30 June 1979

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Board approval

The annual financial statements which appear on pages 9 to 23 were approved by the Board of Directors on 26 September 1979 and are signed on its behalf by

T. F. Muller
J. P. Coetzee | Directors **A. C. Greyl** Group Secretary

Report of the auditors

To the shareholders of South African Iron and Steel Industrial Corporation, Limited (constituted and incorporated by Act of Parliament in the Republic of South Africa).

We have examined the annual financial statements and group information statements set out on pages 9 to 22 which have been prepared on the historical cost basis adjusted in the case of the Corporation and certain subsidiaries by an additional charge for the estimated increased replacement cost of fixed assets as set out in the notes to the annual financial statements.

In our opinion, based on our examination and the reports of the auditors of those subsidiaries not audited by us, the financial statements fairly present, on the basis stated above, the financial position of the Corporation and its subsidiaries at 30 June 1979 and the results of their operations for the year ended on that date.

We have also examined the supplementary current cost income statement for the year ended 30 June 1979, together with the notes thereon, set out on page 23. In our opinion, based on our examination, the statement has been properly prepared, on the basis set out in the notes, to give the information recommended in Guideline 4.003 issued by the National Council of Chartered Accountants (S.A.).

Altmann & Brugman
Peat, Marwick, Mitchell & Co.
Chartered Accountants (S.A.)
Pretoria and Johannesburg

26 September 1979

Report of the Directors

Financial results

The Corporation again had to cope with a very subdued local market and instead of cutting back on its production, found it prudent and more profitable rather to produce at full capacity and to export its surplus production. Of the Corporation's total sales tons as much as 1,8 million tons (1978 - 1,6 million tons), or 37,4% (1978 - 35,5%), were exported. The export of such a large percentage of the Corporation's production at competitive prices on world markets and the high costs of transport had an adverse effect on profits. The increase, however, in tonnages of all products sold, that is steel products, iron ore and by-products, together with improved prices, both locally and overseas, resulted in a turnover of R1 636 million, which is 25% higher than that of the previous year, and consequently the net income from trading amounted to R93,5 million (1978 - net loss from trading R20,2 million) after charging an amount of R98,4 million (1978 - R79,6 million) to production costs as a provision for the eventual higher replacement cost of fixed assets.

As the major portion of the capital extensions programme over the past decade was of necessity financed from loan capital with a resultant heavy yearly financing cost burden, the Government in the previous financial year accepted for its own account R70 million of the Corporation's financing cost, which reduced the net financing cost for that year from R133,7 million to R63,7 million. The Government decided not to accept for its own account any portion of the Corporation's financing costs for this financial year, with the result that net financing charges increased to an all-time high of R141,4 million.

After taking into account dividend income and the loss on the writing off of investments which resulted in a net income of R9,7 million (1978 - R10,7 million) and after charging the net cost of financing of R141,4 million referred to above, the Corporation incurred a loss for the year of R38,2 million (1978 - R73,2 million).

Notwithstanding the loss of R38,2 million referred to above, it should be noted that due to the fact that R98,4 million was provided for increased replacement cost of fixed assets, 'Distributable reserves' increased by R60,2 million to R439,3 million at 30 June 1979 and the net positive cash flow from normal operations for the year amounted to R162,6 million (1978 - R103,9 million).

Capital employed

During the year 52,5 million redeemable preference shares of R2 each were issued at par to the State President, resulting in the total issued and fully paid share capital increasing to R790,2 million on 30 June 1979 (1978 - R685,2 million). Redemption of loans during the year amounted to R591,8 million (1978 - R372,8 million), while further loans of R384,1 million (1978 - R575,7 million) have been taken up. The increase in share capital and net loan redemption resulted in the Corporation's debt ratio being reduced to 58,7% at 30 June 1979 (1978 - 64,8%).

Fixed assets

Additional investment in fixed assets during the financial year amounted to R61,3 million (1978 - R94,1 million). The net depreciated book value of fixed assets at year-end amounted to R1 839,8 million (1978 - R1 880,8 million), which includes extensions under construction of R93,7 million (1978 - R109,1 million), the major portion of which was in respect of development of the Grootegeluk coal mine.

Subsidiaries

A consolidated balance sheet and income statement in respect of the Corporation and its subsidiaries are not being presented, as this is not called for by the Iscor Act and the Directors are of the opinion that such consolidated accounts would not substantially differ from the accounts of the Corporation and would thus be of no real value to shareholders. Group information in respect of subsidiary companies is, however, presented in Annexures 1, 2 and 3.

Effect of changing prices on financial results

A supplementary current cost income statement disclosing the effect of changing prices on financial results, reflecting adjustments in respect of depreciation, cost of sales and financial gearing as recommended by Guideline 4.003 of the National Council of Chartered Accountants of South Africa, is presented as Annexure 4.

Directorate

There was no change in the Board of Directors of the Corporation during the year. The names of the directors in office at 30 June 1979 and at the date of this report are set out on page 1.

Income Statement

for the year ended 30 June 1979

	Notes	1979 R000	1978 R000
Turnover		1 636 277	1 308 993
Net income/(loss) from trading	2	93 [illegible]	(20 177)
Dividends received	3	9 761	10 686
Investments — profit on sale		—	13
— written off		(16)	—
		103 235	(9 478)
Financing charges	4	(141 445)	(63 769)
Net loss for year		(38 210)	(73 247)
Accumulated surplus/(loss) brought forward from previous year		(30 338)	42 942
Net loss for year		(38 210)	(73 247)
		(68 548)	(30 305)
Dividend on 7½% cumulative preference shares		(33)	(33)
Accumulated loss at end of year	6	(68 581)	(30 338)

Balance Sheet

at 30 June 1979

	Notes	1979 R000	1979 R000	1978 R000	1978 R000
Source of capital employed					
Share capital	5		790 200		685 200
Distributable reserves	6		439 347		379 119
Shareholders' interest			1 229 547		1 064 319
Fixed period loans	7		1 748 716		1 956 434
			2 978 263		3 020 753
Employment of capital					
Fixed assets	8		1 839 802		1 880 815
Interests in subsidiary and associated companies	9		213 714		264 286
Sishen-Saldanha scheme	10		45 309		60 139
Loan portion of taxation			—		121
Current assets					
Stocks and work-in-progress	11	697 745		618 422	
Debtors		321 310		315 863	
Bankers and short-term deposits		144 059		135 782	
			1 163 114		1 070 067
			3 261 939		3 275 428
Current liabilities					
Creditors		200 785		201 307	
Import/export schemes	12	19 542		4 472	
Shareholders for dividends		16		16	
		220 343		205 795	
Provisions					
Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses, self-insurance and sundry contingencies		63 333		48 880	
			283 676		254 675
			2 978 263		3 020 753

Notes on the Financial Statements

1. Accounting policies

The financial statements are prepared on the historical cost basis adjusted by an additional charge for the estimated increased replacement cost of fixed assets, as more fully detailed below, and incorporate the following accounting policies which have been followed in all material respects on a basis consistent with that of the previous year.

1.1 Constitution

The Corporation is constituted in terms of the Iron and Steel Industry Act, 1928 (as amended). The Companies Act, 1973 or any amendment thereof, does not apply to the Corporation.

1.2 Group information

The group information presented on subsidiary companies incorporates the financial statements of companies in which the Corporation holds more than 50% of the equity share capital and exercises control.

A company in which the Corporation controls the board of directors by virtue of certain rights attaching to preference shares held, has been excluded on the grounds that the interest of the Corporation in the total equity share capital is insignificant. Dividends received by the Corporation from this investment have been included under dividends received from associated companies.

1.3 Turnover

Turnover represents the invoiced sales value, excluding any import or export levies, of all products sold. Local and export sales are invoiced on despatch ex works, except export sales of iron ore which are invoiced on shipment.

1.4 Depreciation

Depreciation of fixed assets used in production is calculated on a straight line basis at a rate determined by the expected useful life of each individual type of asset.

Where an asset is retired, any under-provision of depreciation required to write off the redundant or obsolete asset is charged against excess depreciation and the proceeds of any sales are credited thereto.

1.5 Increased replacement cost of fixed assets

In addition to depreciation, a charge based on the current wholesale price index is made to production costs to provide for the estimated increased replacement cost of fixed assets.

1.6 Provisions

Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses and self-insurance are provided for by charges to production costs. When expenditure in respect thereof is incurred, such expenditure is charged against these provisions.

The Corporation carries no outside insurance on fixed or current assets.

1.7 Expenditure on mining development

In accordance with the accounting practice generally adopted by the mining industry in South Africa, the following policies are applied in connection with expenditure on new mining development:

Financing charges and other expenditure prior to production as well as prospecting expenditure on properties which are considered viable mining areas are capitalized.

Capitalized expenditure on mining development is written off over the productive life of the mines or 20 years, whichever is the lesser period.

1.8 Financing charges

'Financing charges' represents the net cost of financing which consists mainly of interest paid on fixed period loans, reduced by interest received and financing charges on new mining development capitalized.

The interest rate used to calculate the financing charges capitalized in respect of the pre-production expenditure on new mining development is based on the Corporation's average borrowing rate for the year.

'Financing charges' includes the cost of acquiring loans, differences resulting from foreign currency conversions, premiums and commissions arising from forward exchange purchase contracts, discounts on the issue price of bonds and other expenses incurred on receipt or renewal of loans.

1.9 Site preparation

Expenditure in respect of site preparation for extensions is written off against the excess depreciation provision.

1.10 Steel used on capital extensions

No adjustment is made for profit arising on steel manufactured by the Corporation, sold at arm's length to the trade and subsequently used by contractors on the Corporation's capital extensions.

1.11 Foreign currency conversions

Loans and suppliers credit repayable in foreign currencies and covered by forward exchange purchase contracts are converted into South African currency at the rates of exchange applicable to the respective forward exchange purchase contracts.

Loans and suppliers credit repayable in foreign currencies and not covered by forward exchange purchase contracts are converted into South African currency at rates of exchange ruling at balance sheet date.

Current assets and current liabilities in foreign currencies, not covered by forward exchange purchase contracts, are converted into South African currency at rates of exchange ruling at balance sheet date.

1.12 Stocks and work-in-progress

Finished products and work-in-progress are valued at current standard costs including labour, materials, manufacturing and works overhead costs.

Raw materials, consumable stores and plant spares are valued at current standards. These standards are reviewed at each year-end and on commodities for which purchases have taken place during the year, the standards are changed to the applicable purchase prices.

Rolls and moulds are valued at cost less a charge for usage and a provision for obsolescence.

Provision is made for obsolescence and depreciation on plant spares.

Appropriate provision is made where stock values are considered to exceed net realisable values. The aggregate book value is below cost.

1.13 Research and development

The Corporation is engaged, on a continuous basis, in research and development activities. Expenditure on such activities is charged to production costs and no expenditure is deferred.

	1979 R000	1978 R000
2. Net income/(loss) from trading	**93 490**	**(20 177)**
Net income/loss from trading is arrived at after taking into account —		
Depreciation of fixed assets	102 335	97 478
Increased replacement cost of fixed assets	98 471	79 657
Furnace reconditioning and renewal of short-life assets provision	20 382	17 527
Self-insurance provision	4 573	3 870
Leasing charges — plant and equipment	3 319	2 300
Research and development expenditure	3 471	3 123
Directors' emoluments		
— for service as directors	43	43
— for other services	58	66
Auditors' remuneration		
— Audit fees	152	153
— Expenses	7	10

	1979 R000	1978 R000
3. Dividends received		
Subsidiary companies		
— Unlisted shares	6 069	7 087
Associated companies		
— Listed shares	2 299	2 295
— Unlisted shares	1 393	1 304
	9 761	10 686
4. Financing charges	141 445	63 769
Financing charges are arrived at after deducting —		
Financing charges recovered from the State	—	70 000
Interest received		
— Subsidiary companies	8 534	12 859
— Associated companies	1 433	1 477
— Other	21 632	15 968
Financing charges capitalized — new mines	7 519	7 357
Interest recovered — Sishen-Saldanha scheme	5 080	9 935
	44 198	117 596
5. Share capital		
Prescribed by Iron and Steel Industry Act, 1928 (as amended)		
500 000 A shares of R2 each	1 000	1 000
500 000 000 B or preference shares of R2 each	1 000 000	1 000 000
	1 001 000	1 001 000
Authorized, issued and fully paid		
500 000 A shares of R2 each	1 000	1 000
341 880 364 B shares of R2 each	683 761	683 761
219 636 7½% cumulative preference shares of R2 each	439	439
52 500 000 Redeemable preference shares of R2 each	105 000	—
	790 200	685 200

The unissued B or preference shares may be issued by the Board at not less than par and under such conditions as the State President may approve, provided that present holders of B shares shall have the first right to subscribe for such additional shares.
No dividend rate or date of redemption has been determined in respect of the redeemable preference shares.

	1979 R000	1978 R000
6. Distributable reserves		
Reserve for increased replacement cost of fixed assets		
Balance at beginning of year	**409 457**	329 800
Charged to production costs	**98 471**	79 657
Balance at end of year	**507 928**	409 457
Accumulated loss per income statement	**(68 581)**	(30 338)
Net distributable reserves	**439 347**	379 119
7. Fixed period loans		
These loans have scheduled repayment dates during the years ending 30 June		
— 1979	**—**	571 925
— 1980	**347 736**	353 088
— 1981	**346 064**	281 980
— 1982	**181 989**	172 301
— 1983	**181 766**	98 880
— 1984 onwards	**691 161**	478 260
	1 748 716	1 956 434
Loans repayable in foreign currencies which are not covered by forward exchange purchase contracts —		
United States dollars	**40 149**	51 402
British Sterling	**29 241**	30 715
	69 390	82 117

	1979 R000	1978 R000
8. Fixed assets		
Cost —		
Properties, leases and rights	54 917	53 868
Buildings and works	722 813	708 886
Machinery, plant and furnaces	1 543 488	1 491 902
Expenditure on mining development	72 980	67 136
	2 394 198	2 321 792
Depreciation —		
Properties, leases and rights	796	748
Buildings and works	150 178	125 277
Machinery, plant and furnaces	466 021	391 160
Expenditure on mining development	5 885	3 320
	622 880	520 505
Net book value —		
Properties, leases and rights	54 121	53 120
Buildings and works	572 635	583 609
Machinery, plant and furnaces	1 077 467	1 100 742
Expenditure on mining development	67 095	63 816
Net book value of fixed assets in production	1 771 318	1 801 287
Extensions under construction — at cost	93 675	109 154
	1 864 993	1 910 441
Excess depreciation (see (i) below)	25 191	29 626
Net book value of fixed assets	1 839 802	1 880 815
(i) Excess depreciation		
Balance at beginning of year	29 626	29 922
Site preparation written off	(1 766)	(296)
Under-provision of depreciation on fixed assets retired	(2 700)	—
Proceeds from sale of fixed assets	31	—
Balance at end of year	25 191	29 626
(ii) Certain fixed assets have been erected on property of companies wholly-owned by the Corporation. Net book value	11 328	9 552
(iii) Certain fixed assets have been erected on property owned by certain mining companies in terms of mutual interest agreements. Net book value	18 627	20 829
(iv) Included under 'Buildings and works' are hostel buildings and houses situated on leasehold property in the South African Development Trust area in terms of the leasehold agreement. Net book value	4 055	4 195

	1979 R000	1978 R000
9. Interests in subsidiary and associated companies	**213 714**	**264 286**
Subsidiary companies (see Annexure 1)		
Unlisted shares — at cost less amounts written off. (In the opinion of the directors, the value of the shares is not less than book value)	**48 278**	48 028
Loans and advances		
Due to Corporation	**131 601**	174 898
Due by Corporation	**(15 457)**	(6 764)
	164 422	216 162
Associated companies		
Listed shares — at cost (market value 30 June 1979 — R19 683 000; 1978 — R18 881 000)	**24 389**	24 389
Unlisted shares — at cost less amounts written off. (In the opinion of the directors, the value of the shares is not less than book value)	**5 021**	5 287
Loans and advances		
Due to Corporation	**21 639**	19 712
Due by Corporation	**(1 757)**	(1 264)
	49 292	48 124
Comprises interests in —		
Companies whose operations form part of the main functions of the Corporation	**186 578**	241 419
Companies with investments in the iron, steel engineering and allied fields	**27 136**	22 867
	213 714	264 286

10. Sishen-Saldanha scheme

Amount due by South African Railways Administration —		
Portion of the operating expenditure of the scheme financed by the Corporation	**23 419**	13 826
Loan — including accrued interest	**21 890**	46 313
	45 309	60 139

(i) The portion of operating expenditure of the scheme financed by the Corporation is repayable as follows —
R19 000 000 plus interest on 21 August 1979 and
R4 419 000 plus interest out of future income from the scheme.

(ii) The loan is repayable on 14 December 1979.
Interest on the loan is payable six-monthly in arrear.

	1979 R000	1978 R000
11. Stocks and work-in-progress less provisions — in the aggregate below cost		
Finished products	135 259	111 453
Work-in-progress	195 058	160 595
Raw materials	39 585	35 636
Plant spares	189 977	178 814
Consumable stores	94 882	84 905
Rolls and moulds	42 984	47 019
	697 745	618 422
12. Import/export schemes		
Tinplate scheme	8 378	1 579
Steel import scheme	6 187	(1 410)
Iron and steel export scheme	4 977	4 303
	19 542	4 472

The above schemes are administered by the Corporation on behalf of the Department of Industries.

13. Taxation

No provision has been made for current normal taxation as the accumulated assessed loss exceeds the taxable income for the year under review. Taxation deferred by reason of accelerated allowances on fixed assets has not been provided for as the Corporation has an accumulated assessed loss which exceeds timing differences by R37 000 000.

14. Contingent liabilities

The Corporation has —

(i) guaranteed the principal sum and interest on loans to its housing and estate companies	24 100	28 400
(ii) issued other guarantees	4 534	3 745
(iii) discounted bills receivable	5 263	12 141

It is not anticipated that the Corporation will be called upon to fulfil any of the above obligations.

15. Commitments

(i) Capital commitments for ext		
— Contracted for	41 438	20 009
— Authorized expenditure for which there are no negotiated contracts	25 519	37 625

Capital expenditure will be financed from share issues, loans and funds generated by the Corporation from normal operations.

(ii) Leasing

Amounts outstanding under agreements entered into for leasing of plant and equipment for the years ending 30 June

— 1979	—	3 265
— 1980	4 505	4 150
— 1981	10 162	9 902
— 1982	10 800	10 500
— 1983	11 732	11 432
— 1984 onwards	137 171	136 971
	174 370	176 220

Statement of Source and Application of Funds

for the year ended 30 June 1979

	1979 R000	1978 R000
Source of funds		
Net loss for year	(38 210)	(73 247)
Depreciation	102 335	97 478
Increased replacement cost of fixed assets	98 471	79 657
Funds from normal operations	162 596	103 888
Increase in share capital	105 000	50 000
Decrease in loan to South African Railways — Sishen-Saldanha scheme	14 830	38 604
Proceeds of fixed period loans	384 120	575 741
Decrease in interests in subsidiary and associated companies	50 572	11 944
Fixed assets sold to a subsidiary company	—	7 840
Proceeds from sale of other fixed assets	31	—
	717 149	788 017
Application of funds		
Acquisition of fixed assets	61 353	94 113
Redemption of fixed period loans	591 838	372 789
Dividend on 7½% cumulative preference shares	33	33
Increase in working capital	63 925	321 082
	717 149	788 017
Analysis of changes in working capital		
Increases in working capital		
Stocks and work-in-progress	29 323	43 891
Debtors	5 447	121 132
Bankers and short-term deposits	8 277	154 187
Creditors	522	17 931
	93 569	337 141
Decreases in working capital		
Loan portion of taxation	121	733
Import/export schemes	15 070	7 283
Provisions	14 453	8 043
	29 644	16 059
Net increase in working capital	63 925	321 082

GROUP INFORMATION STATEMENT — ANNEXURE 1

Interests in Subsidiary Companies

at 30 June 1979

Name of company and nature of business	Issued capital ordinary shares		Percentage holding		Book value of Corporation's holdings in shares		Amounts owing to/(by) Corporation		Year ends other than 30 June
	1979 R	1978 R	1979	1978	1979 R	1978 R	1979 R000	1978 R000	
Companies									
Housing, property and investment									
Minsa (Pty) Ltd	3	3	100	100	3	3	2 341	2 341	28 February
Tornado Enterprises (Pty) Ltd	4 000	4 000	100	100	439 916	439 916	811	781	28 February
Yskor Landgoed (Pty) Ltd	2 000	2 000	100	100	2 000	2 000	88 008	92 427	
Yskor Newcastle Grondbesit Ltd	7 612 500	7 612 500	100	100	42 354 050	42 354 050	(6 596)	(6 751)	31 March
African Metals Ltd	2 000	2 000	60	60	1 200	1 200	502	502	31 March
Manufacturing									
Cape Town Iron and Steel Works (Pty) Ltd	1 500 000	1 500 000	100	100	1 330 000	1 330 000	4 251	4 918	
Iskor (Pty) Ltd	500 000	500 000	100	—	250 000	—	1 149	—	
Vantin (Pty) Ltd	700 000	700 000	100	100	1 186 840	1 186 840	8 268	4 530	28 February
Mining									
Industrial Minerals Mining Corporation (Pty) Ltd (Registered in S.W.A.)	2 000	2 000	100	100	2 000	2 000	6 524	9 194	
The Durban Navigation Collieries (Pty) Ltd	516 000	516 000	99,9	99,9	2 699 298	2 699 298	6 368	38 163	
Service									
Grootegeluk Coal Mine Construction Company (Pty) Ltd	2	2	100	100	2	2	(8 849)	8 578	
Iscor Berlin (Pty) Ltd	100	100	100	100	286	286	4 165	4 858	
Iscor Utility Stores (Pty) Ltd	2 000	2 000	100	100	2 000	2 000	3 806	3 501	31 March
Steel Sales Company of Africa (Pty) Ltd	10 000	10 000	100	100	10 000	10 000	(12)	(12)	
Associations not for gain									
Housing and property									
Iscor Housing Utility Company	—	—	—	—	—	—	1 091	540	30 September
Vanderbijl Park Estate Company	—	—	—	—	—	—	4 165	4 146	
Vanderbijl Park Hostels Association	—	—	—	—	—	—	212	409	31 March
					48 277 595	48 027 595	116 144	168 134	

Notes:

1. Except as indicated, all companies are incorporated and carry on their principal operations in the Republic of South Africa.
2. 'Associations not for gain' are treated as subsidiaries where the Corporation controls the board of directors.
3. Following the rights issue to be made by Metkor Investments Limited and Iscor's undertaking in terms of an agreement dated 27 April 1979 not to take up its rights, Iscor will lose its controlling interest in the company, as its voting rights will decrease from 74,5% to 43,8% on the date the shares are issued. The company has thus been treated as an associated company at 30 June 1979 and not included in the group information statements on Iscor's subsidiaries.

GROUP INFORMATION STATEMENT — ANNEXURE 2

Statement of Shareholders' Equity, Assets and Liabilities of Subsidiaries

at 30 June 1979

	1979 R000	1978 R000
Net book value of Iscor's investment in shares of subsidiaries	48 278	48 028
Excess of cost of shares in subsidiaries over net asset value at date of acquisition	(9 470)	(9 932)
	38 808	38 096
Iscor's interest since acquisition in		
— Non-distributable reserves of subsidiaries	3 439	3 439
— Distributable reserves and revenue profits to 30 June 1978	12 344	12 050
— Revenue profits and distributable reserves for year	3 582	323
Shareholders' interest attributable to Iscor	58 173	53 908
Outside shareholders' interest	347	(1 050)
Total shareholders' interest in subsidiaries	58 520	52 858
Non-distributable reserves in associations not for gain	1 349	1 286
— Balance 30 June 1978	1 286	1 168
— Movement for year	63	118
	59 869	54 144
Represented by:		
Fixed assets	148 727	143 153
Goodwill	548	548
Investments		
— Listed (Market value 30 June 1979 — R97 251 000: 1978 — R62 518 000)	25 961	25 961
— Unlisted	7 095	9 017
Township development	4 211	4 203
Advances against mortgage bonds — housing	82 772	85 376
Fixed deposits — collateral security for housing	22 384	23 062
Suspensive sales debtors — housing	1 485	1 694
Loan portion of taxation	38	105
Current assets	90 644	47 821
Current liabilities	(32 839)	(20 001)
	351 025	320 939
Long term liabilities	291 157	266 795
Debentures	30 900	—
Long term loans		
— Housing	92 347	90 013
— Other	46 082	3 211
Provision for township development	2 516	2 952
Deferred taxation	3 168	2 485
Owing to Iscor	116 144	168 134
Total net assets of subsidiaries	59 869	54 144

Statement of Revenue Profits and Losses and Distributable Reserves of Subsidiaries

for the year ended 30 June 1979

	1979 R000	1978 R000
Iscor's share in accumulated revenue profits and distributable reserves of subsidiaries since acquisition to 30 June 1978	12 373	12 050
Iscor's share of accumulated loss in an associated company before becoming a subsidiary during the year	(29)	—
	12 344	12 050
Iscor's share of revenue profits and distributable reserves for year (see 1 below)	9 651	7 410
	21 995	19 460
Iscor's share of dividends paid or declared out of these profits during the year	6 069	7 087
Iscor's share of revenue profits and distributable reserves at year-end as per Annexure 2	15 926	12 373

Notes on Annexures 2 and 3

1. Iscor's share of revenue profits and distributable reserves for the year is made up as follows:

— Revenue profits	7 813	6 020
— Reserve for increased replacement cost of fixed assets in respect of certain subsidiaries	1 838	1 390
	9 651	7 410

2. Where subsidiary companies have financial years ending on dates other than 30 June (see Annexure 1), the latest available financial statements have been used. Inter-company balances have been adjusted to agree with the balances as reflected by the Corporation.

Current Cost Income Statement

for the year ended 30 June 1979

	Notes	1979 R000
Turnover		1 636 277
Net income from trading on historical cost basis	1	191 961
Current cost adjustment	2	(162 436)
Net income from trading		29 525
Dividends received		9 761
Investments written off		(16)
		39 270
Financing charges		(141 445)
		(102 175)
Financial gearing adjustment	3	57 502
Net loss for the year		(44 673)

Notes —

1. To arrive at the net income from trading on historical cost basis, the net income from trading per the financial statements has been adjusted by R98 471 000, being the charge to production costs to provide for the estimated increased replacement cost of fixed assets.

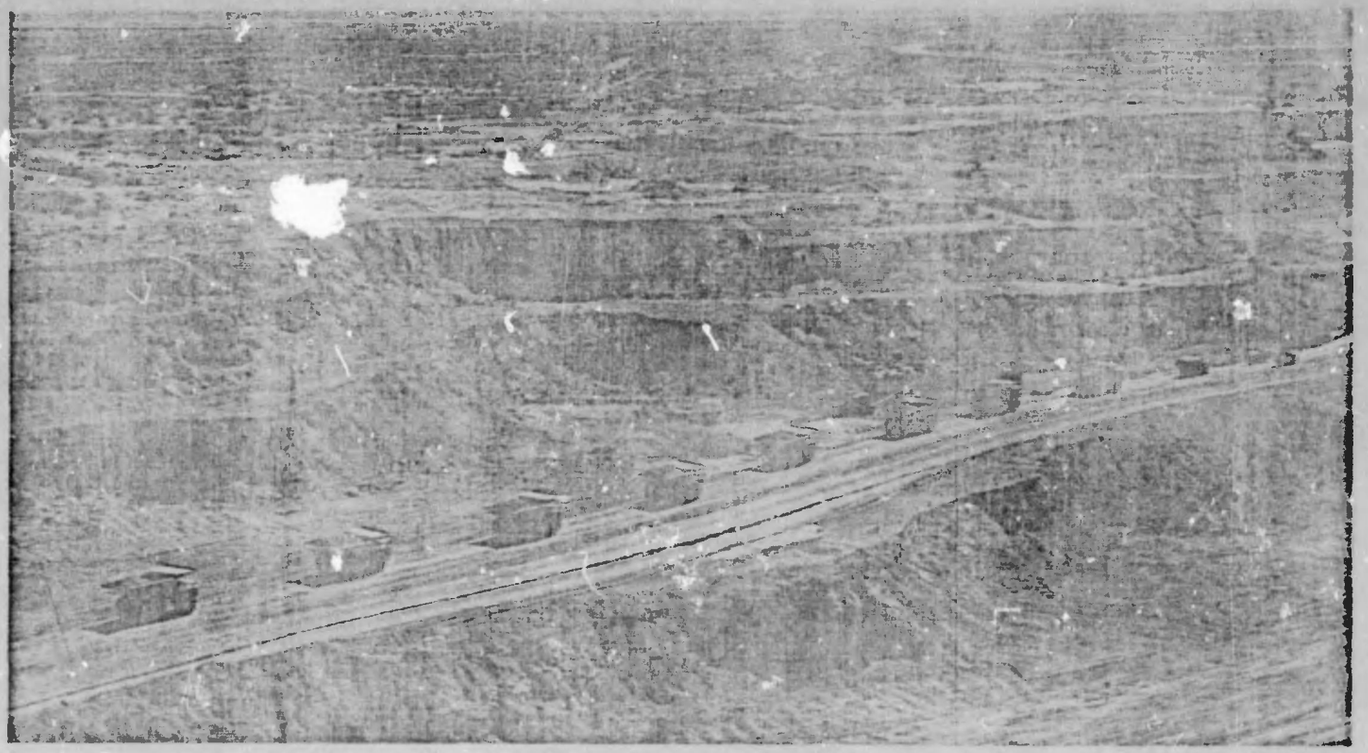
2. Current cost adjustment —

Additional depreciation calculated on current cost of fixed assets using the wholesale price index	98 471
Cost of sales adjustment to reflect the cost of stock consumed at current prices	63 965
Adjustment to trading profit	162 436

3. Financial gearing adjustment —

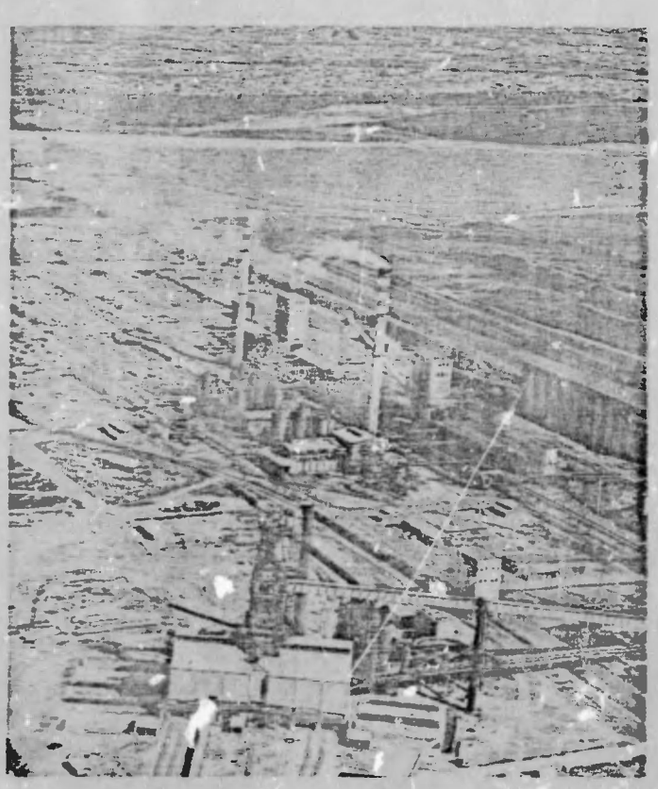
The adjustment for financial gearing represents the portion of the current cost adjustment attributed to the average level of finance provided by outside sources of capital during the year. This average has been calculated with reference to the net monetary liabilities at the beginning and at the end of the year.

Average net monetary liabilities	1 554 352
Non-monetary credit balances	2 829 606
	4 383 958
Financial gearing percentage	35,4%
Financial gearing adjustment	57 502



Ore trucks filing out of a pit at the Sishen iron ore mine.

No. 5 blast furnace (in foreground) and coke ovens at the Newcastle North Works.



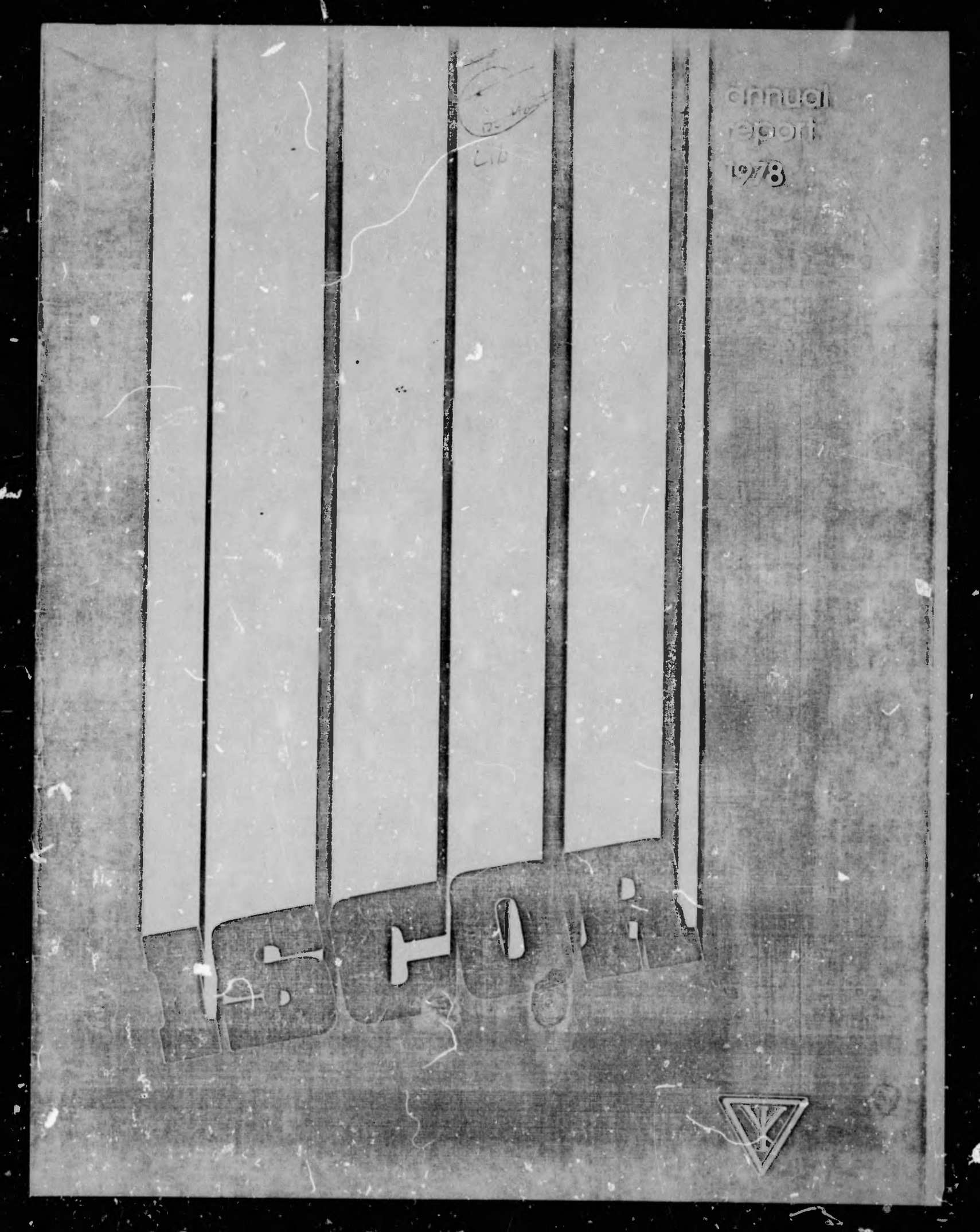
A 150-ton electric arc furnace being tapped at the Vanderbijlpark Works.

Ten-year Review 1970 - 1979 (Year ended 30 June)

Description	1979	1978	1977
Raw materials consumed (tons):			
Iron ore (including fine ore for sintering)	8 301 100	7 655 500	7 664 800
Coking coal	6 123 000	6 145 900	6 156 800
Other coal	397 800	428 300	429 600
Dolomite (raw)	1 339 500	1 226 100	1 280 000
Production (tons):			
Ingot steel	3 903 600	4 199 700	4 487 000
Continuously cast blooms/slabs	2 554 400	1 810 000	1 167 600
Sales (tons):			
Prime steel products*	4 691 900	4 406 200	3 788 200
Pig iron	149 000	173 100	245 100
Coke oven by-products	246 300	244 300	234 100
Operating results:	R	R	R
Net sales value	1 415 548 000	1 133 585 000	917 554 000
Net profit/(loss) before tax	(38 210 000)	(73 247 000)	(49 089 000)
Taxation:	—	—	—
Financial:			
Source of capital employed:			
Share capital	790 200 000	685 200 000	635 200 000
Distributable reserves	439 347 000	379 119 000	372 742 000
Fixed period loans	1 748 716 000	1 956 434 000	1 753 482 000
Current liabilities and provisions	283 676 000	254 675 000	257 280 000
	3 261 939 000	3 275 428 000	3 018 704 000
Employment of capital:			
Fixed assets			
in operation — at cost less depreciation	1 746 127 000	1 771 661 000	1 597 543 000
under construction — at cost	93 675 000	109 154 000	294 477 000
Investments	213 714 000	264 407 000	273 014 000
Current assets	1 208 423 000	1 130 206 000	853 670 000
	3 261 939 000	3 275 428 000	3 018 704 000

* Excluding off-cuts and scrap.

1976	1975	1974	1973	1972	1971	1970
6 704 700	6 226 700	5 968 200	5 593 000	5 668 800	4 905 800	4 073 300
5 112 400	4 684 100	3 980 700	3 840 800	3 806 800	3 644 400	3 173 800
443 200	460 900	478 000	471 000	424 600	444 600	433 700
1 114 000	1 041 600	1 036 400	1 002 200	1 006 700	886 300	631 700
4 676 900	4 349 700	4 036 500	4 052 700	3 816 300	3 478 400	3 384 900
497 200	306 200	20 200	—	—	—	—
3 587 700	3 346 300	3 135 500	2 968 200	2 659 000	2 638 200	2 676 400
318 200	413 300	684 700	627 700	846 900	650 200	100
223 300	188 700	140 800	145 100	144 500	154 500	158 500
R	R	R	R	R	R	R
766 456 000	601 860 000	444 840 000	372 819 000	304 067 000	291 470 000	238 480 000
(30 057 000)	(35 874 000)	(37 603 000)	3 954 000	9 538 000	19 520 000	15 040 000
—	—	—	—	619 000	4 946 000	5 781 000
515 200 000	325 200 000	195 200 000	165 200 000	145 200 000	125 200 000	95 200 000
357 664 000	338 259 000	339 885 000	355 987 000	341 252 000	330 644 000	316 150 000
1 868 706 000	1 285 700 000	814 824 000	439 693 000	175 134 000	138 583 000	65 615 000
270 492 000	283 297 000	220 324 000	108 905 000	100 793 000	72 827 000	85 693 000
3 012 062 000	2 232 456 000	1 570 233 000	1 069 785 000	762 379 000	667 254 000	562 638 000
1 303 888 000	1 085 971 000	737 609 000	363 075 000	332 662 000	308 799 000	288 060 000
905 649 000	552 161 000	381 001 000	311 577 000	87 214 000	37 140 000	28 970 000
271 039 000	227 121 000	179 169 000	149 623 000	142 172 000	131 774 000	127 126 000
532 086 000	367 203 000	272 454 000	245 510 000	200 331 000	189 541 000	118 482 000
3 012 062 000	2 232 456 000	1 570 233 000	1 069 785 000	762 379 000	667 254 000	562 638 000


annual
report
1978

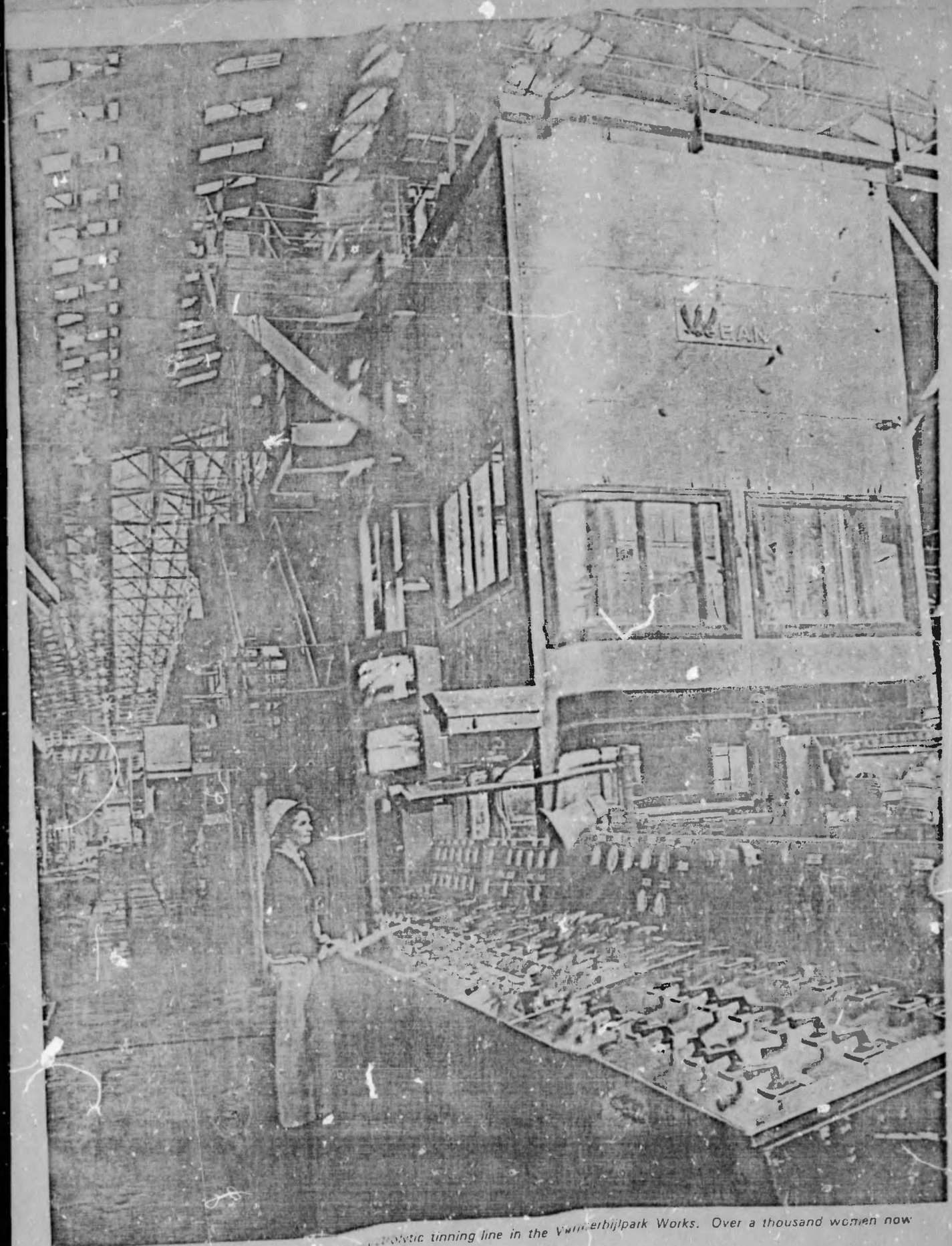
South African Iron and Steel Industrial Corporation, Limited

(Constituted and incorporated by Act of Parliament in the Republic of South Africa)

As at 30 June 1978:

Board of Directors	Dr. T. F. Muller, Chairman Mr. J. P. Coetzee (Managing) Prof. D. G. Franzsen Mr. P. K. Hoogendyk Dr. J. P. Kearney Mr. J. J. Kitshoff Dr. M. D. Marais Prof. H. J. Samuels Mr. J. J. Vermooten
Managing Director	Mr. J. P. Coetzee
General Manager	Mr. K. R. Rümelin
Divisional General Managers —	
Mining	Mr. M. J. Deats
Supplies	Mr. L. Duncker
External Interests	Mr. H. C. H. Hutten
Steel Operations	Mr. F. P. Kotzee
Steel Marketing	Mr. P. A. Olivier
Mining Products Marketing	Mr. P. J. C. Pretorius
Planning and New Development	Mr. K. Prince
Finance and Business Services	Mr. L. van Zyl

(Hierdie verslag is ook in Afrikaans beskikbaar)



A female operator at a control panel of the [illegible] tinning line in the Vanderbijlpark Works. Over a thousand women now occupy Iscor posts traditionally held by men.

Notices of Meetings

Annual General Meeting of Private Shareholders

Notice is hereby given that the annual general meeting of private shareholders (holders of B shares or preference shares) of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, on Wednesday, 29 November 1978, at 09h00, to nominate an auditor in accordance with Section 14(1) of Act No. 11 of 1928, as amended.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

By order of the Board
A. C. Greyling
Group Secretary

Iscor Headquarters
P.O. Box 450
Pretoria 0001

25 October 1978

Forty-Ninth Annual General Meeting

Notice is hereby given that immediately after the annual general meeting of private shareholders convened for 09h00 on Wednesday, 29 November 1978, the annual general meeting of shareholders of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, for the following business:

1. To receive the balance sheet and report of the directors for the year ended 30 June 1978.
2. To transact such other business as may be transacted at an annual general meeting of shareholders of the Corporation.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

By order of the Board
A. C. Greyling
Group Secretary

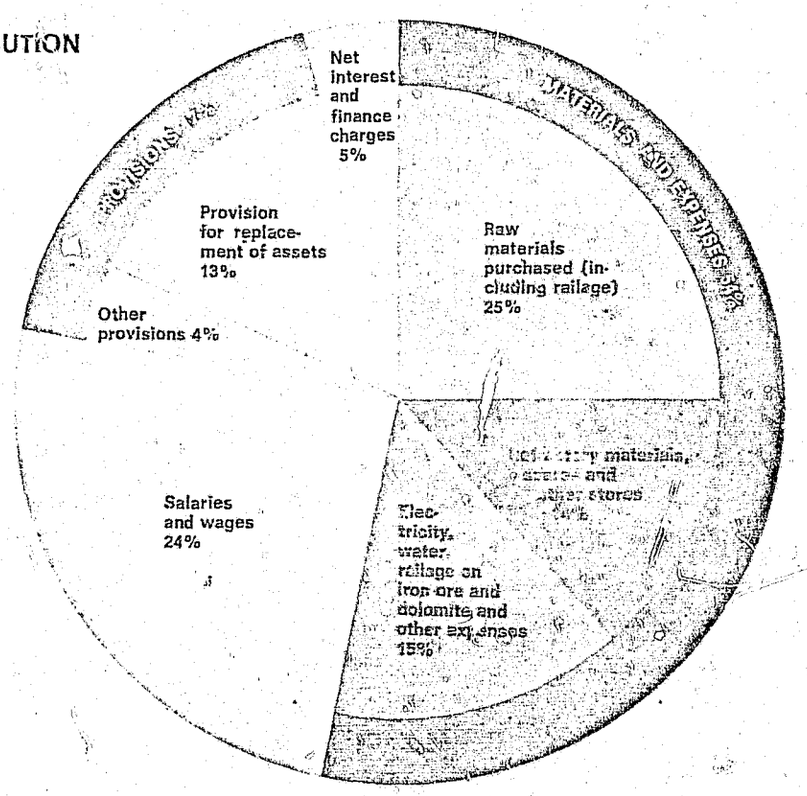
Iscor Headquarters
P.O. Box 450
Pretoria 0001

25 October 1978

At a Glance

(Figures rounded off to nearest thousand)	1978	1977
Steel production	6 010 000 tons	5 655 000 tons
Prime steel products sold	4 406 000 tons	3 788 000 tons
Net sales revenue (all products)	R 1 133 585 000	R 917 554 000
Gross trading profit	R 59 480 000	R 108 907 000
Reserve for increased replacement cost of fixed assets	79 657 000	64 200 000
Net trading profit/(loss)	(20 177 000)	44 707 000
Other income	10 699 000	10 132 000
	(9 478 000)	54 839 000
Financing charges	63 769 000	103 928 000
Net loss for year	R 73 247 000	R 49 089 000
Capital expenditure — during year	R 94 113 000	R 294 839 000
Fixed assets (net value) — at year-end		
— in production	R 1 771 661 000	R 1 597 543 000
— under construction	109 154 000	294 477 000
	R 1 880 815 000	R 1 892 020 000
Source of funds employed		
— shareholders' interest	R 1 064 319 000	R 1 007 942 000
— fixed period loans	1 956 434 000	1 753 482 000
	R 3 020 753 000	R 2 761 424 000

PERCENTAGE DISTRIBUTION OF TOTAL COST: 1977/78


Net interest and finance charges 5%
Provision for replacement of assets 13%
Other provisions 4%
Raw materials purchased (including railage) 25%
Salaries and wages 24%
Electricity, water, railage on iron ore and dolomite and other expenses 15%

Statement by the Chairman

TO THE SHAREHOLDERS

The dire circumstances in which the world steel industry is still finding itself and to which reference was made in last year's report, have shown no improvement since then. From a recent survey it appears that virtually all the major steel producers of the Western World are showing losses to a greater or lesser extent. Another report indicates that the annual losses of the European Economic Community's steel industry exceed $2 000 million. In fact, it would seem that the only primary producers still operating profitably are those who themselves undertake further processing of their steel into secondary products.

Iscor has not escaped these unfavourable conditions.

In the previous Statement to Shareholders reference was made to several of the problems facing Iscor against the background of the world-wide economic recession. These problems, to which the directorate and management are devoting their continued attention, are having such a profound effect on the Corporation's profitability, production programmes, marketing strategy, stocking and prospects that they warrant some further discussion.

Unrealistic debt ratio

At the end of the financial year, 64,8 per cent of Iscor's total net assets was financed by means of loans or other forms of financial commitments. This situation arose in consequence of the comprehensive expansion programme at the works and mines, launched in 1968 to be able to meet as far as possible the expected increase in the domestic demand for steel products according to long-term projections at the time.

Up to that stage virtually all extensions had been financed from own capital. When, in consultation with the Government, the 1968 expansion programme was decided upon, it was also decided that new extensions — mainly the erection of the Newcastle Works, extension of the Vanderbijlpark Works, modernization of the Pretoria Works and corresponding extensions at Iscor mines to supply raw materials to the works — would be effected by means of loan financing. In the light of the conditions prevailing at the time, it was a logical decision, since

- Iscor, mainly as a result of the pricing policy of previous years, did not itself have the necessary financial reserves at its disposal;
- loan funds, mainly from abroad, were freely available to South Africa;
- interest rates were relatively low;
- Iscor had almost no debts and its borrowing capacity was therefore relatively unlimited;
- loan tenures at that stage normally extended over about 20 years; and
- internal cash flow, mainly that derived from depreciation and the provision which is made annually for the higher replacement cost of fixed assets, would be more than sufficient for providing funds for the repayment of long-term loans.

The financing programme, in order of utilization, was therefore composed of internal cash flow, loan capital and, if necessary, share capital.

Although the Iscor Board during 1968, when the expansion plans were approved, committed itself not to allow its debt ratio to exceed the 40 per cent limit, a more comprehensive expansion programme was decided upon in 1971. However, it was still possible to continue with the loan financing programme, since projections had shown that the debt ratio would at no time exceed 60 per cent and that it would again fall to 40 per cent at a relatively early stage after commissioning of the extensions.

From 1971 up to the completion of the programme in 1976, there was a drastic change in circumstances.

- The availability of foreign loans declined sharply. Over the past few years, loan funds from those markets have been practically unobtainable.
- The tenure of foreign loans shortened dramatically: whilst the 1968 planning was based on periods of 20 years, availability in the mid-seventies was limited to one or at the most two-year periods.
- Interest rates, particularly in this country, have risen sharply.
- Inflation during the construction period resulted in production facilities having cost much more than was planned in 1968.
- The new production facilities commissioned during the past two years, came into production when the domestic demand for steel had already fallen substantially, and Iscor was consequently obliged to export at unattractive international prices in order to avoid closing down plants.

As a result of the foregoing circumstances, the Corporation is now faced with an intolerably high level of loan redemption and accompanying interest burden.

In order to make timeous provision for part of the loan redemption programme, which during the 1978/79 financial year will amount to R572 million, the Corporation intentionally took up more loans during the year under review than were necessary for its immediate needs. This was done because local and foreign money and capital markets were highly liquid and loan funds were readily available, at favourable rates. The balance sheet shows that cash with bankers and on short-term deposits amounted to R136 million. However, this amount was utilized early in the new financial year.

Over the past four years, the Government has contributed appreciable amounts in share capital to augment Iscor's redemption needs; in the past financial year this contribution came to R50 million. It was nevertheless necessary for the Government to contribute a further R70 million in order to bring some relief to the Corporation with regard to its financing cost, which amounted to R134 million in respect of the year under review. The amount provided by the Government was calculated on the basis of the cost to Iscor had its debt ratio been more or less that envisaged in the original extension programmes.

Domestic demand for steel and the export programme

During the year, 3,9 million tons of steel products were delivered to consumers in the local market by Iscor and other suppliers. This is an increase of 400 000 tons, or 11 per cent, over the total of 3,5 million tons supplied during the previous year.

Of the tonnage obtained from South African sources, the Corporation supplied 75,7 per cent and other steel producers jointly 24,3 per cent.

Although this increase in tonnages sold locally is gratifying, it is not nearly in proportion to the additional steel-making capacity which became available at Newcastle and Vanderbijlpark through the expansion programme previously referred to. Iscor at present has excess capacity over that required by the local steel market, which necessitated the exportation of 1,6 million tons, or 35,3 per cent of its sales tonnages during the year under review.

Owing to keen competition in a depressed world steel market and South Africa's unfavourable geographic situation, Iscor's net earnings in respect of its steel exports were inevitably much lower than average domestic sales yield. However, Iscor has always absorbed these differences, and therefore the local steel consumers do not subsidize its export activities. On a comparable basis, a customer in Europe pays an average of R10 to R15 a ton more for the Iscor steel, delivered to his warehouse, than a South African customer close to our works.

Mainly on account of the high fixed-cost structure in the steel-making industry, it is a fact that if exports were discontinued, production consequently cut and manufacturing equipment taken off stream, losses would mount and further adjustments to local steel prices would become necessary. Meanwhile, employment is maintained and valuable foreign currency is also earned.

In recent times there has been an upward trend in prices on foreign markets, probably mainly as a result of the weakening of the dollar in relation to other currencies, notably the Japanese yen. In February 1977 a series of so-called trigger prices were introduced in the USA.

The trigger price system led to general increases in the prices of imported steel products in the USA, and although the scheme contains benefits for both the American steel producers and exporters to the USA, there is a definite possibility that, if the dollar continues to weaken vis-à-vis the yen, trigger prices may soon reach a level where steel imports will no longer be able to compete with equivalent American products at current published prices in that country.

With this possibility in mind, the Corporation is actively engaged in developing additional markets for its exports.

In April this year, South Africa concluded an agreement with the European Economic Community in which the total tonnage of rolled steel products which South African steel producers may export to member countries during the current calendar year, and the minimum prices at which these products may be sold, are laid down. Similar agreements were concluded by various other countries, including Japan.

As in the case of the trigger price system introduced by the USA, the provisions contained in these agreements, together with the fixing of minimum prices for a range of steel products in the domestic markets of the member countries, have led to increases in the prices of imported steel in general.

There are unmistakable signs of an economic revival in South African industry, but this revival is likely to be gradual, and the market position, and consequently Iscor's profitability, will probably not show any marked change in the 1978/79 financial year. As far as overseas countries are concerned, it would appear that there are few signs of an improvement in the demand for steel. In view of the idle steel-making capacity on the international front, the Corporation is not optimistic about any appreciable improvements in the prices of its steel products on foreign markets.

Domestic steel price

As a result of the unabated local rate of inflation, which earlier this year for the first time fell to below 10 per cent after having been above this level for five years, Iscor too, like most other South African undertakings, experienced enormous increases in its production costs. Owing to the nature of its business and the major role of Non-White labour, coal, refractories, electricity and railage, in respect of which the cost increases were higher than the average rise in the wholesale price index, the steel price increases granted were insufficient to offset these.

The Government continued to follow a policy — deemed justified in the national interest — of giving high priority to the fight against inflation and was therefore prepared to agree that no dividend be payable on its share investment in Iscor. Furthermore, the Government's approach was to allow Iscor even to suffer losses rather than to grant the steel price increases which would have been necessary to counter the rises in cost. By means of the periodic contributions to share capital, already referred to, however, the Government ensured that these losses did not water down the Corporation's shareholders' interest.

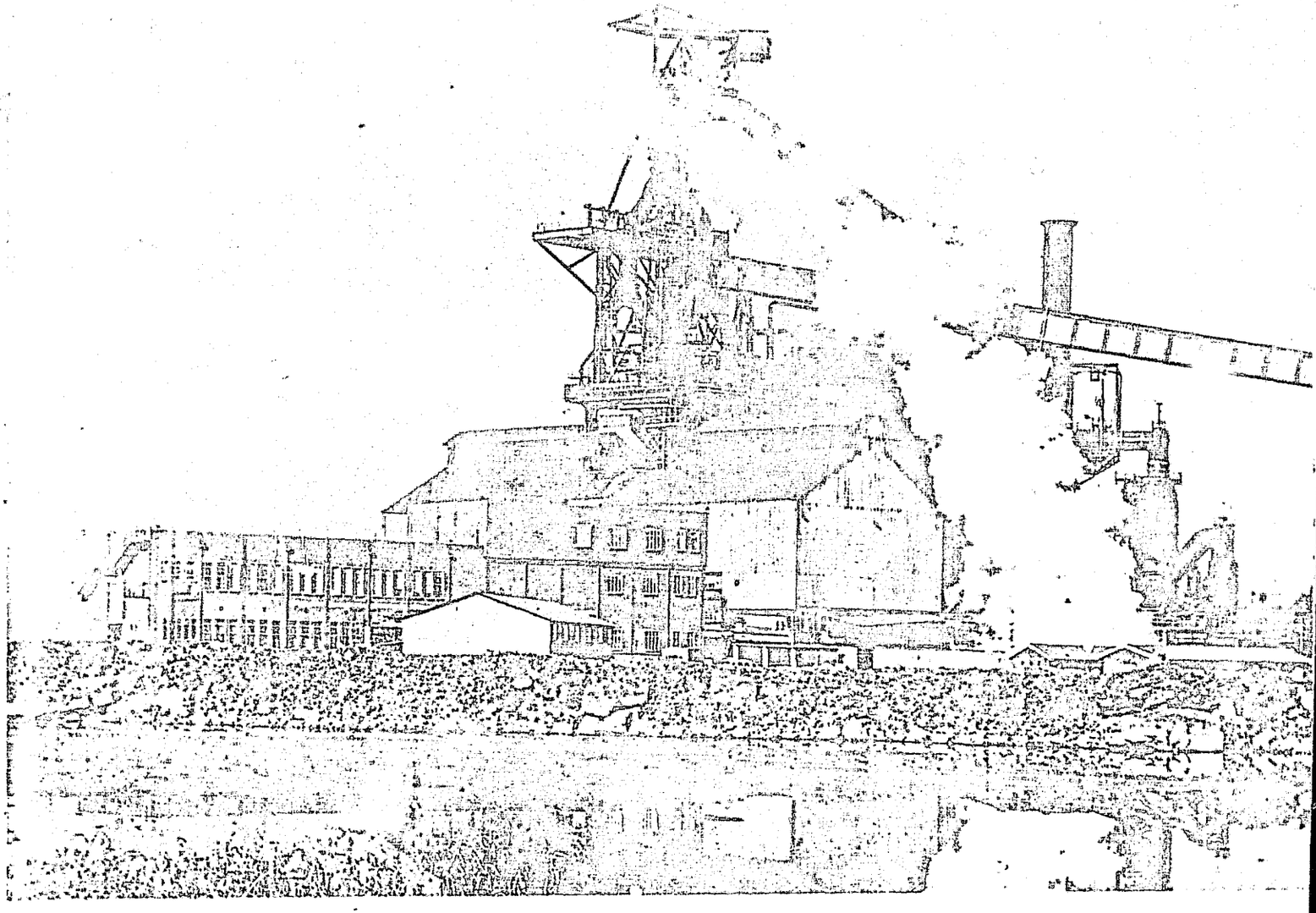
A steel price increase of 9,5 per cent or R20,76 per ton net on profile products and 13,5 per cent or R35,57 per ton net on flat products was granted with effect from 1 January 1978, as well as a further increase of R4 per ton on profile extras in respect of light flats and angles with effect from 12 June 1978. These price increases were not nearly sufficient even to offset the rises in cost which occurred during the year. Moreover, it is generally known that the controlled price of steel was for many years not adjusted to keep pace with cost increases.

A further price increase of 10 per cent on all primary steel products and pig iron took effect on 15 September 1978 — $2\frac{1}{2}$ months after the end of the year under review.

This increase was granted by the Government as an interim measure to relieve the present severe problems of cost increases with which the steel industry is faced, since the price increase granted on 1 January had not been sufficient to offset the existing back-log and the abnormal increases in input cost at that stage.

The Government has also indicated that after this interim adjustment, no further adjustments would be made during the current financial year and that future steel price increases would be considered only during July of each year.

Mention was made on several occasions of the price sensitivity applying to certain specific products in particular during the present year and in respect of which a 10 per cent price increase may adversely



Blast furnace N5 in the Newcastle Works. Months of lost production at this giant furnace detrimentally affected Iscor's operating results.

affect sales volumes. Although the price increase was announced in the Government Gazette as a fixed percentage applicable evenly across the whole range of products, its actual application is being effected with circumspect and discretion.

Blast furnace production

The new blast furnace N5, with a capacity of 3 200 tons per day, which was erected at the Newcastle Works at a cost of R52 million, broke out in September 1977, only nine months after it had been commissioned. The furnace was recommissioned 7½ months later, after considerable modifications had been effected in consultation with a large Japanese steel manufacturer.

The break-down had an extremely unfavourable effect on Iscor's results for the year under review — not only in consequence of the high repair cost but particularly because it adversely affected the very area where a bottleneck existed, namely liquid iron production.

As was already indicated in the previous annual report, Iscor at present has a considerable reserve capacity in the mills, even if all metallurgical production facilities were operated at maximum capacity. The break-out of blast furnace N5 accordingly caused a chain reaction, which was felt right through to the production of finished steel products.

It is estimated that the furnace could have produced approximately 550 000 tons of liquid iron during the time it was out of commission, from which more than 400 000 tons of finished products could have been manufactured. The effect of the break-out was to some degree counteracted by steps taken temporarily to increase production at other units, although this could be achieved only at higher operating costs.

The furnace was recommissioned on 1 May 1978 in terms of a know-how agreement entered into with a major overseas steel company. A good many commissioning problems are still being experienced *inter alia* as a result of the poor quality coke which is produced from available South African coal. There are indications that the furnace will be run at lower-than-planned capacity for the best part of the current year and that the resultant lower production will also adversely affect the 1978/79 results.

Imbalances and under-utilized capacity in iron and steel production

During the year under review, total blast furnace production, mainly as a result of the long period that furnace N5 at Newcastle had been out of commission, showed an increase of only 48 000 tons, or 0,9 per cent, over the figure for the previous year and totalled 5,2 million tons.

The combined liquid iron production, used for pig iron and the production of steel, showed an increase of 93 000 tons, or 1,8 per cent, over the comparative figure for the previous year.

Liquid steel production amounted to 6,2 million tons, which is 408 000 tons, or 7,0 per cent, higher than the previous year's figure. The usable production of ingots, in the conventional form, and of blooms and slabs by means of the newer continuous casting process, came to 4,2 and 1,8 million tons, respectively.

The deliberate curtailment and consolidation of the expansion programme, in order to restrict capital expenditure to a minimum as reported in 1977, have resulted in certain production units not being fully in tune with one another. In an integrated iron and steel industry, major additions can be effected only in large steps, as regards capacity and hence capital. Consequently, it was inevitable that under-utilized capacity would result, the cost of which during the year under review is calculated at approximately R100 million.

Iscor is still in a favourable position for the future as far as the increasing of production capacity is concerned. By the addition of mainly metallurgical facilities, at relatively low capital expenditure, the potential capacity of the mills can be fully utilized. Before additional capacity is created, capital would first have to be spent in those areas where short-term benefits may be derived. The recovery of the domestic market will dictate when such a step will be economically justified.

Coal supply

The total tonnage of coal received by the three works during the year under review, amounted to 6,1 million, of which approximately 1,4 million tons were supplied by the Corporation's Durnacol mine. About 4,7 million tons were purchased from other collieries in Natal and Transvaal, which means that the private sector met 77 per cent of Iscor's coal needs.

It was mentioned in last year's review that a breakthrough had been made with the discovery of three promising straight coking coal deposits in the northern Transvaal and that a solution to the Corporation's long-standing concern about the quality of coke for its blast furnace operation may now be in sight.

A box-cut is presently being developed on one of these deposits, situated south-west of Tshipise. The object is to obtain a large sample of this coal and also to investigate different mining methods with a view to ascertaining how this coal deposit may be mined and beneficiated. Various mining and other organizations in the private sector have been approached to determine whether they would be interested in the proposed development and operation of this mine. Several have reacted, but no final decision has yet been taken on the exact *modus operandi*.

It was also mentioned last year that the development of the Grootegeluk mine, near Ellisras in the north-western Transvaal, for the supply of blend coking coal had been deliberately delayed in consequence of the Corporation's curtailment programme. However, it was evident during the year under review that, owing to the coking quality of the coal currently available and the fact that certain mines of the private-sector suppliers would reach the end of their useful lives in the near future, it was imperative to arrange for supplementary supplies from alternative sources without delay.

With due regard to the risky position as far as the supply of suitable coal was concerned, the Corporation announced in January 1978 that the development of the Grootegeluk mine was being proceeded with.

Because this decision, which will require a capital investment by the Corporation of more than R200 million, was taken during a period of economic slump and virtually total absence of long-term foreign financing of projects in the Republic, Iscor was forced to investigate various methods of financing the Grootegeluk project from local sources. It appeared that for several reasons it was not practicable to have the development and financing of the total project undertaken by the private sector.

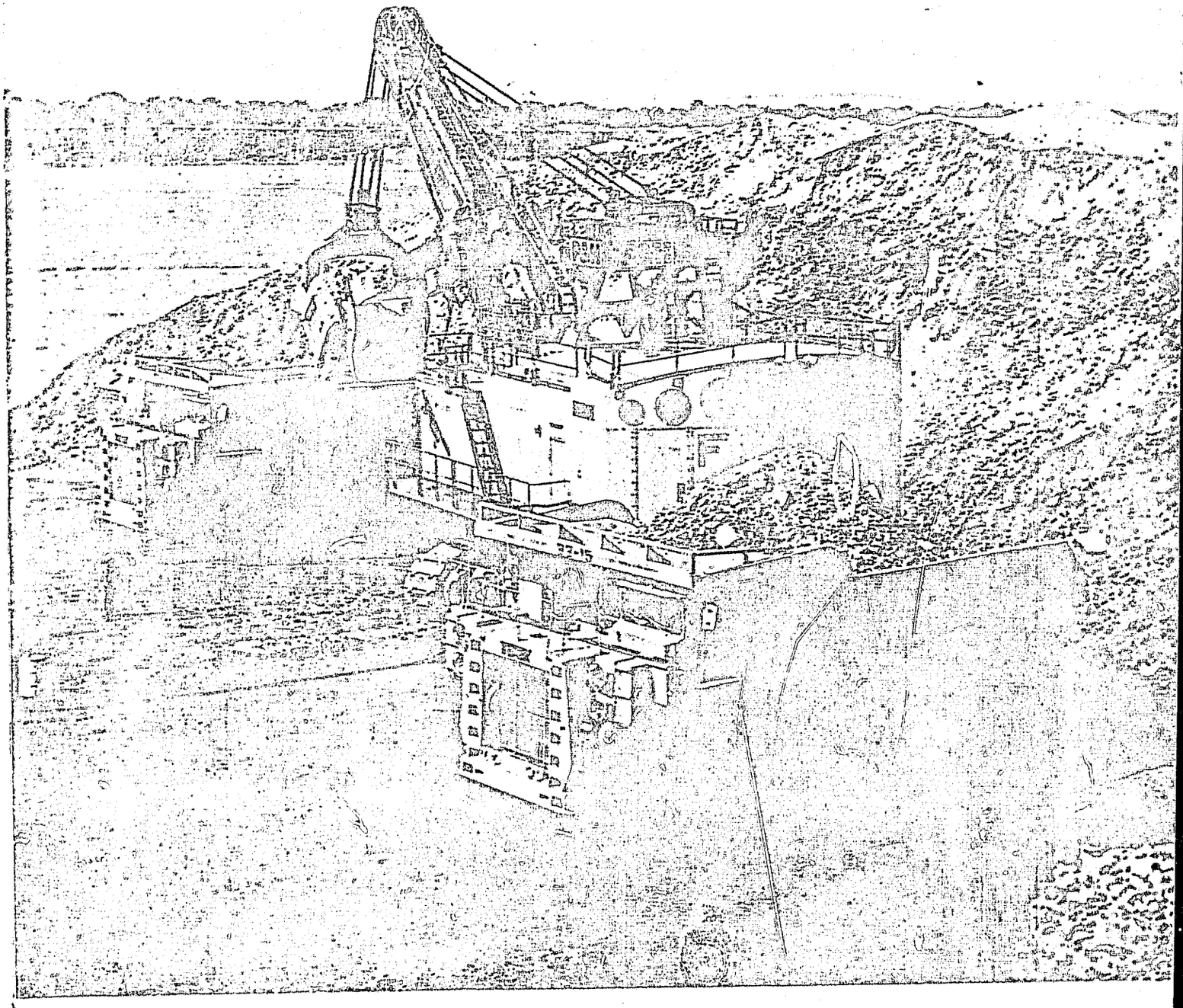
After thorough investigation it was decided to finance the beneficiation plant of the Grootegeluk mine by means of leasing facilities, thus offering the private sector the opportunity of some participation in the development of Iscor projects. At the same time, the Corporation's financing needs would be satisfied through its own efforts and it would not be necessary to turn to the Government, as shareholder, to supply the required capital.

A further important factor which contributed to the decision to acquire this plant on a leasing basis, is that Iscor is not at present able to use the large deferred tax benefits accumulated during its expansion phase, but in this manner it may now derive some benefit from it much sooner.

The awarding of the contract worth more than R100 million for bridging financing and leasing to the Standard Bank group is one of the largest leasing contracts ever concluded and has evoked widespread interest. The whole transaction has been developed from ideas which originated from the Southern Life Association and thanks are due to them for the initiative they took in the matter.

The leasing contract makes provision for an initial leasing period of 10 years, with continuation options for two further periods of five years each. These options need be exercised only at the end of the initial leasing period, and only then will it be known whether the final term will be 10, 15 or 20 years.

The Grootegeluk coal mine, with a proposed initial capacity of 1,8 million tons of blend coking coal per annum, will start supplying Iscor's works by the middle of 1980. During the year under review, waste stripping was continued, and up to the end of the year 10 million bank cubic metres of overburden was removed without a hitch. Contracts have already been awarded for the building of additional houses, a pipeline for the supply of water for construction purposes and for the beneficiation plant. The establishing of the necessary infrastructure, with the co-operation of various Government departments and other bodies, is proceeding to plan. A start has been made by the South African Railways with the construction of a railway line between the mine and Thabazimbi, and it is expected to be completed in time for goods traffic when Grootegeluk commences production in 1980. The Hans Strijdom



Pit equipment at the Grootegeluk coal mine, which is due to come into production by the middle of 1980.

Dam of the Department of Water Affairs will start storing water at the end of 1979.

Although there is every indication that the long-standing problems experienced by the Corporation with its coal qualities may be solved, the quality of available coal was a limiting factor during the year under review and will remain so for the next few years.

Profitability of the ore export scheme

From the commencement of Sishen iron ore exports through the new Saldanha Bay harbour in September 1976 up to the end of the past financial year, a total of 19,5 million tons of ore (wet base), with an estimated f.o.b. invoice value of R250 million, was shipped.

During the financial year, 12,8 million tons of ore were railed from Sishen to the terminal, whilst 12,6 million tons were shipped.

The Sishen-Saldanha Bay project for the exportation of iron ore was undertaken by Iscor in consultation with the Government at a time when the gold price was fixed at 35 US dollars per fine ounce and it was generally expected that the gold mining industry would dwindle. With a vigorous international steel industry and Iscor's extensive reserves of high-grade iron ore in the Sishen area, it was expected that revenue from iron ore exports could to some extent help replace that from gold.

This expectation of large-scale iron ore exports to earn valuable foreign currency, was realized through the success already achieved with the ore export scheme. In the financial year under review, 184 million US dollars were earned in this way in overseas countries, which made a significant contribution to the favourable reversal in the country's balance of payments position on current account.

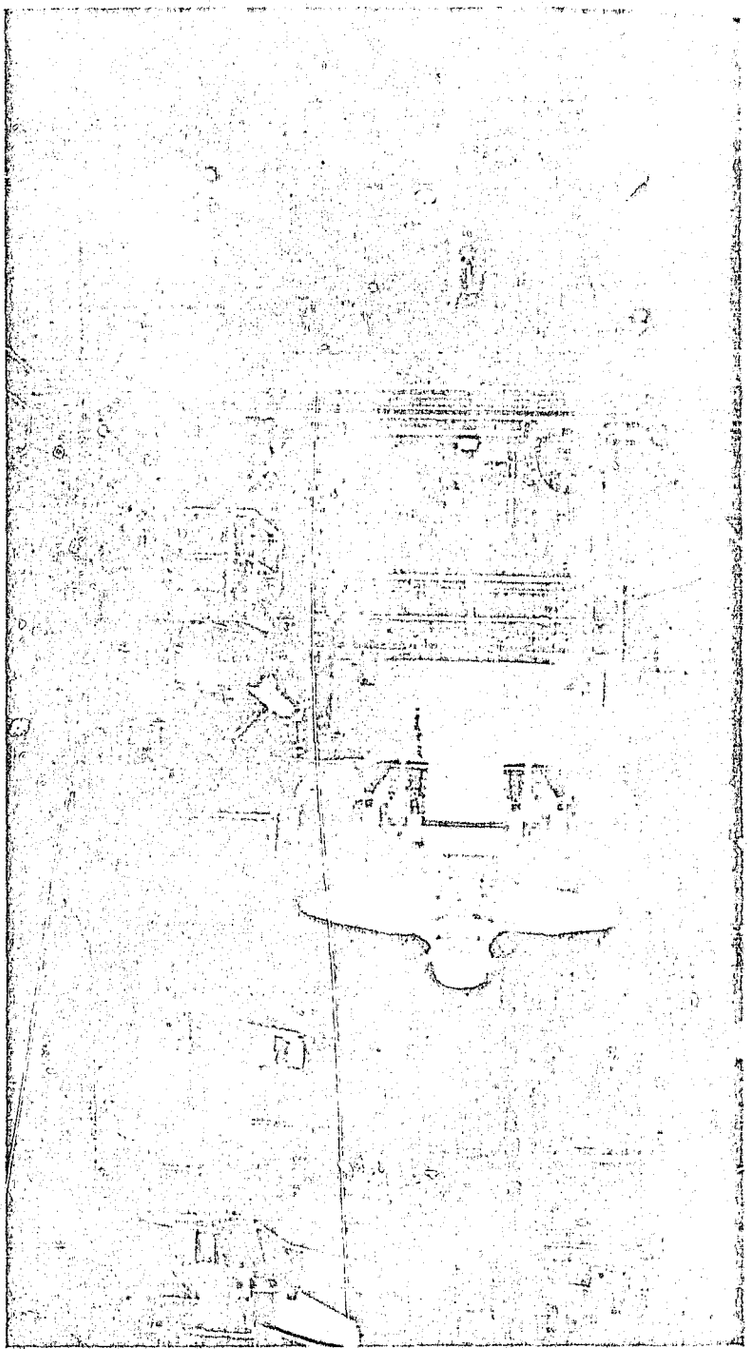
However, it was realized from the outset that, although this scheme held considerable advantages for the Republic, the Corporation would not make large profits from it during the first few years. The current protracted world-wide recession and consequent cut-back in steel production caused a substantial decline in the international demand for iron ore. In addition, prices are relatively low whilst production costs are rising sharply. This fact was responsible for the yield on capital invested in the scheme having been considerably lower during the year under review than Iscor's average cost of loan capital.

The running-in tonnages envisaged for the first three years of operation of the scheme, have so far been more or less achieved. The losses sustained by Iscor and the SA Railways during this period were within the limits of estimates. As from April 1979 — the commencement of the fourth year of operation and the year in which iron ore exports, according to original calculations, would reach the maximum annual tonnage of 18 million — Iscor as guarantor must, however, bear all the losses, including those the Railways may sustain.

The overseas market does not show any clear signs of recovery at present, and it is expected that blast furnace production throughout the world would increase by only about 2 to 3 per cent a year over the next few years. Under the circumstances, no sudden revival of the iron ore market is expected in the short term.

Personnel shortages

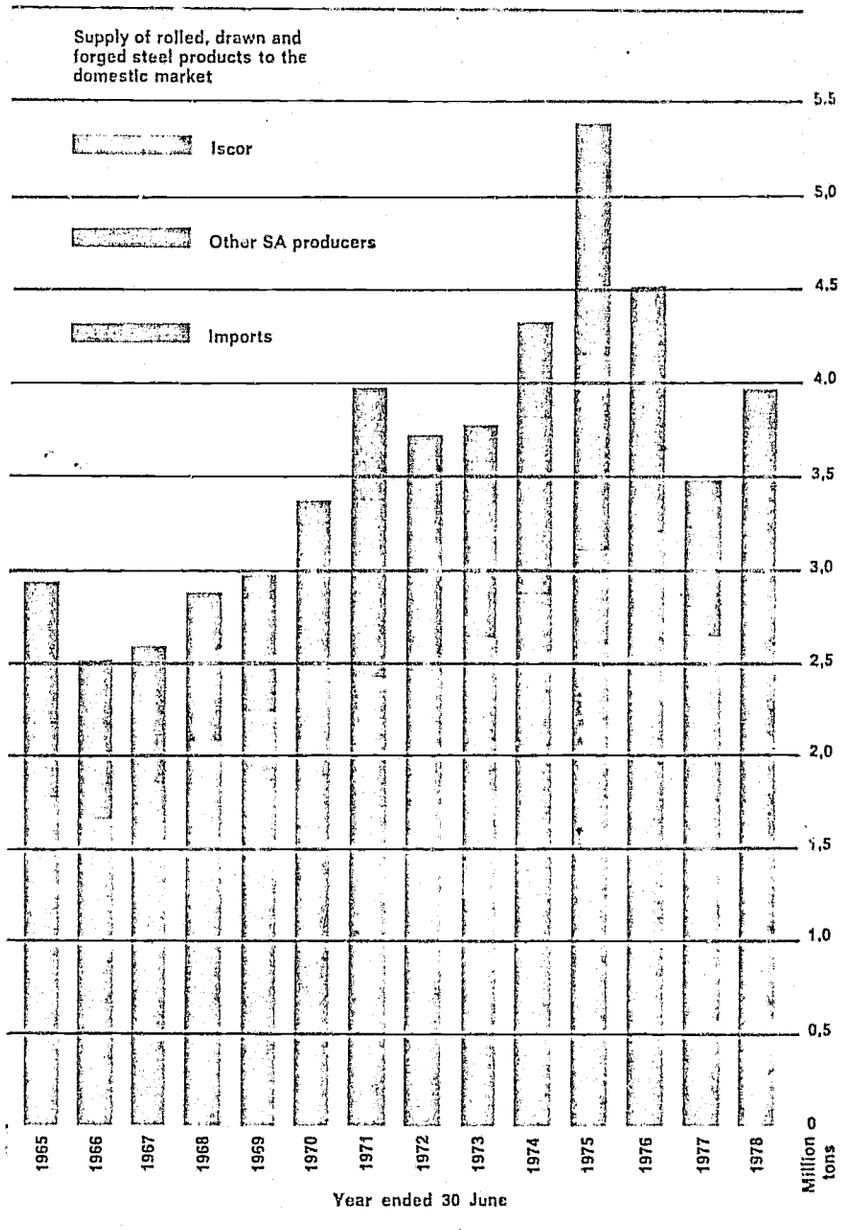
Iscor is still experiencing employee shortages in certain professional and skilled labour categories.



The modern vacuum arc degassing plant at the electric arc furnaces in the Vanderbijlpark Works.

To meet this shortage and to counteract, or even eliminate, the attendant unavoidable use of expensive hired labour, a scheme was introduced under which artisans are offered alternative conditions of service. This scheme, on which agreement was reached with the trade unions, includes conditions for the artisans which are competitive with those of labour brokers. In terms of these conditions the employees concerned do not receive all the normal fringe benefits offered by Iscor but do receive the equivalent value on their wages. The scheme went into effect during February 1978, and at the end of June 1978 already 579 artisans were employed in terms of it.

Another step taken some years ago to combat the labour shortage was to appoint women in posts



traditionally occupied by men. At the end of the financial year, 1 013 women were employed in these specific posts at the Vanderbijlpark and Pretoria Works.

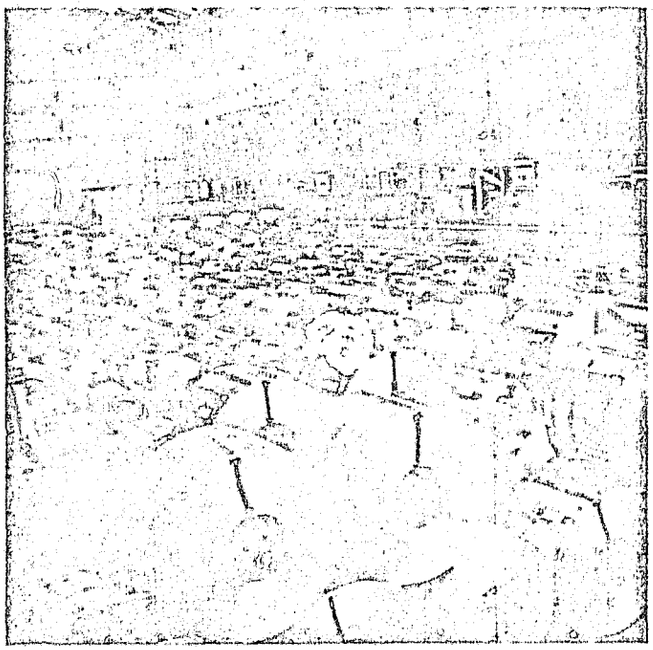
At present, 258 Iscor bursary holders are studying at South African universities, whilst 3 745 apprentices and 361 learner technicians and draughtsmen are employed at the various training centres of the Corporation. At the beginning of 1978, the Vanderbijlpark Works, in conjunction with the University of Potchefstroom, started with the training of pupil engineers, of whom 18 were in the Corporation's employ at the end of the financial year. At the same time, 1 332 employees were on military service for periods ranging from three weeks to 24 months. Such employees receive remuneration while doing their national service.

The nature of the work in most areas at Iscor is such that long training periods are required before employees reach optimum efficiency. Owing to the large number of employees in Iscor's service — 59 420 at the end of the year under review — as well as the chronic shortage of trained workmen in the country as a whole, there is a continuous personnel turnover, which is having an adverse effect on production.

COST REDUCTION AND PRODUCTIVITY IMPROVEMENT

Iscor's directorate and management made significant progress during the year in the battle to keep costs as low as possible and to increase productivity.

A comparison of the cost per ton of liquid steel for



Coils of galvanized sheet ready for dispatch from the Vanderbijlpark Works.

the past two years shows that the average unit cost in real terms declined by between 5 and 6 per cent during 1977/78. This improvement in unit cost was achieved as a result of resolute efforts by all levels of management and may be ascribed mainly to:

- an increase of 7 per cent in liquid steel production, which resulted *inter alia* from the better utilization of new capacity;
- a rise of 5 per cent in labour productivity (man-hours per ton) after a trend of improvement had also been maintained during the previous year;
- a decline of 2,5 per cent in the coke consumption rate as a result of strict control of coal quality, coke manufacture and blast furnace operation; and
- the productivity improvement programme which offers employees the opportunity to submit formal proposals which may lead to productivity improvement or cost savings.

In 1975 the directorate appointed a committee of experts under the chairmanship of Prof. C. W. I. Pistorius, director of the Post-graduate School of Management of the University of Pretoria, to investigate certain specific efficiency aspects. The recommendations of the committee which completed its work during the year under review, have already been implemented to a large extent.

In order to control costs and increase efficiency, continual attention is given to the improvement of production processes at the works and mines. So, for example, good results were achieved during the year with experiments made at the Vanderbijlpark Works to reduce the alkali in sinter. The process concerned, based on a method developed by the Research and Process Development department, has been provisionally patented on a world-wide scale and has evoked considerable overseas interest. This practice holds great benefits for blast furnace operation.

Extensive tests were also carried out during the year with briquetted coal. The use of coke produced by this method has yielded promising results.

OPERATING RESULTS

Although sales revenue for the year rose to R1 309 million (1977: R1 003 million), all the unfavourable factors contributed to the Corporation's showing a loss of R73,2 million for the financial year. However, it must be stressed that this loss position, arose after — and this is important — an amount of R79,7 million had been charged against production cost in respect of provision for the higher replacement cost of production units, when they ultimately have to be replaced.

It was pointed out in the previous annual report that, as far as was known, only one overseas primary steel producer was making such a provision. Any other steel producer would therefore, with the same financial results achieved by Iscor during the year under review but under that producer's accounting principles, have declared a profit of R6,4 million. Despite what other steelworks are doing in this connection, however, the Corporation considers it imperative under the present inflationistic conditions to make this provision. The position is nevertheless unlikely to improve radically as long as the present subdued market conditions prevail locally.

With the exception of the Grootegeluk coal mine, only the completion and rounding-off of certain projects to which Iscor had previously committed itself, were continued with. Capital expenditure during the year amounted to R94 million, as compared with R638 million and R295 million during the two preceding years, respectively, and reflects the drastic curtailment programme.

DIRECTORATE AND MANAGEMENT

During the year Mr. J. P. Coetzee and Dr. J. P. Kearney were reappointed as directors by the State President for a further period of three years. At the annual general meeting of private shareholders in 1977, also Prof. D. G. Franzsen, Mr. P. K. Hoogendyk and Mr. J. J. Kitshoff were reappointed as directors for a further term of three years. I wish to express my sincere thanks to my co-directors, as well as to all members of management and all other employees, for their valuable support and co-operation in the present difficult times.

Since the end of the financial year, Mr. J. P. Coetzee decided for health reasons to relinquish his post as Managing Director. He therefore retired in this capacity on 30 September, but he stays on as a member of the directorate. I should like to avail myself of this opportunity to express my appreciation for his loyal and valuable services to the Corporation over the years.

At the forthcoming annual general meeting I will move that the annual financial statements, as submitted, be approved and adopted and that all things undertaken and performed on behalf of the Corporation, be confirmed.

Pretoria
25 October 1978

T. F. MULLER
Chairman

Annexure

The following major projects were completed and commissioned at Iscor centres during the financial year (the total cost was not necessarily incurred only in the financial year):

- **Pretoria Works**

  Extensions at the forge press, at R5,4 million.

  Pig-casting plant — replacement of the inadequate old casting machine by a new machine with a capacity of 30 000 tons per month, at R2,56 million.

  Conversion of hot blast stove No. 9 at the blast furnaces, at R1,85 million.

  Saw and gag press plant No. 2 at heavy mill finishing, at R2,0 million.

- **Vanderbijlpark Works**

  A third reheating furnace and ancillary equipment for the 2 050 mm hot strip mill in the North Complex, at R12,5 million.

  A fourth continuous pickling plant, with a capacity of 60 000 tons per month, at R21,2 million.

  The following facilities were converted to be capable of handling coils of greater mass in the South Complex:

  A single-stand temper mill, at R6,1 million.
  A five-stand tandem cold mill, at R4,1 million.
  A shearing line, at R2,4 million.

  Stretcher straightening and temper mills at galvanizing line V3 in the South Complex, at R2,1 million.

- **Newcastle Works**

  A gas holder, with a volume of 150 000 cubic metres, at R4,2 million.

- **Sishen South Mine**

  A primary crusher plant, at R5,5 million.

  A new sludge removal system, at R2,8 million.

  Expansion of the exchange yard to make provision for 100-wagon trains, at R2,4 million.

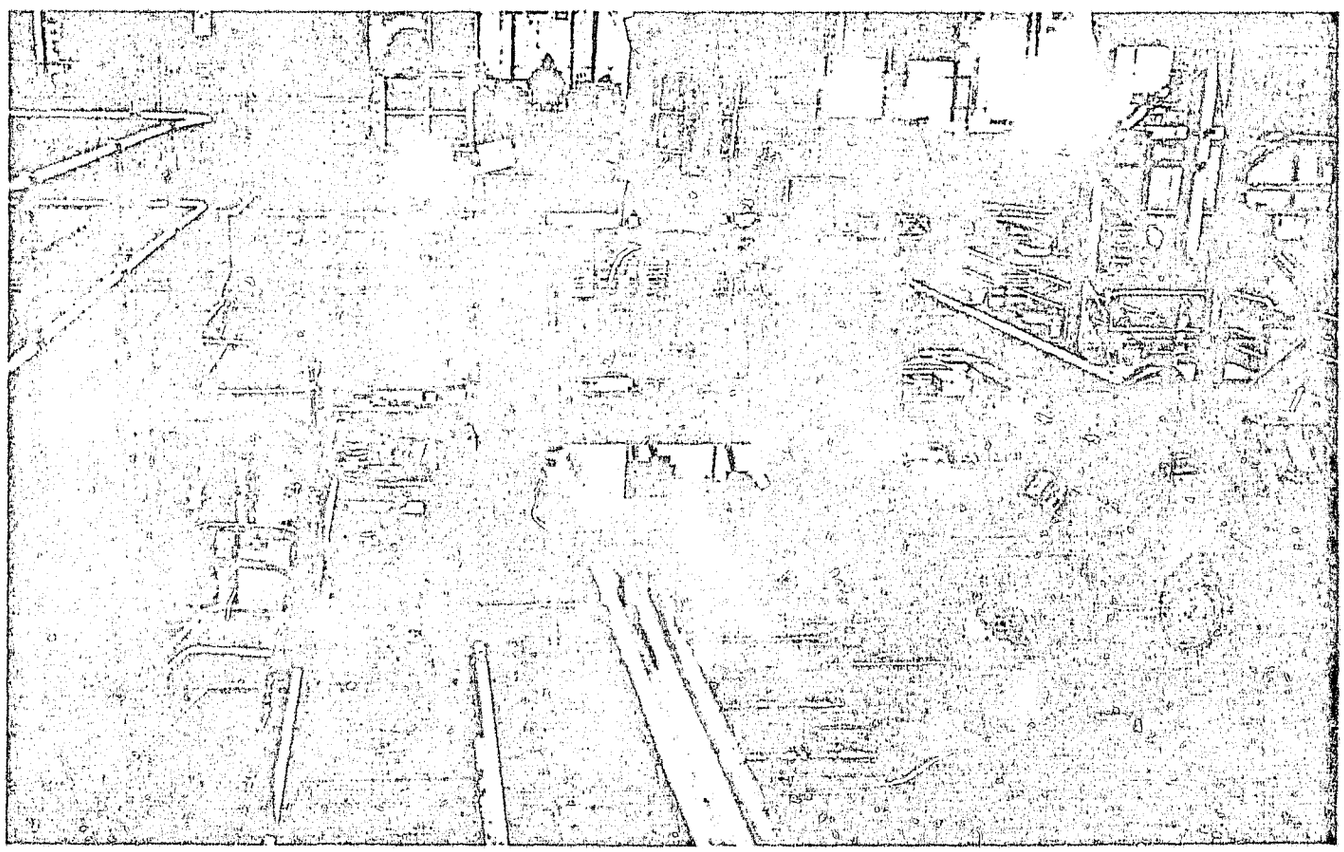
  Modifications and improvements to the ore handling plant to raise its capacity to 7,5 million tons a year, at R1,8 million.

- **Sishen North Mine**

  Two power shovels, each with a capacity of 15,3 cubic metres, at R4,8 million.

  Housing, training facilities and social services, at R10,4 million.

The first roughing stand of the heavy mill at the Pretoria Works.



SOUTH AFRICAN IRON AND STEEL INDUSTRIAL CORPORATION, LIMITED

Annual Financial Statements

for the year ended 30 June 1978

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Board approval

The annual financial statements which appear on pages 15 to 24 were approved by the Board of Directors on 30 August 1978 and are signed on its behalf by

T. F. Muller
J. P. Coetzee | Directors **A. C. Greyling** Group Secretary

Report of the auditors

To the shareholders of South African Iron and Steel Industrial Corporation, Limited (constituted and incorporated by Act of Parliament in the Republic of South Africa).

We have examined the annual financial statements of the Corporation set out on pages 15 to 24 for the year ended 30 June 1978.

In our opinion, based on our examination, they fairly present the financial position of the Corporation and the results of its operations for the year then ended.

Altmann & Brugman
Peat, Marwick, Mitchell & Co.
Chartered Accountants (S.A.)

Pretoria and Johannesburg
15 September 1978.

Report of the Directors

Financial results

Iscor's turnover increased by 30,5% from R1 003 million in the previous year to R1 309 million this financial year. Trading results for the year under review have, however, once again been adversely affected by the fact that approximately 35,5% of the total tonnages of steel products sold consisted of exports where the net income on such sales was considerably reduced by railage, freight and other distribution costs. In addition, the high rate of inflation and the consequent rises in production costs which outstripped the effect of the increased selling prices of steel products in the domestic market which became effective during January 1978, also contributed substantially to the unfavourable financial results for the year.

After charging an amount of R79 657 000 (1977 — R64 200 000) to production costs in respect of reserve for increased replacement costs of fixed assets, the income statement reflects a net loss from trading of R20 177 000 (1977 — net income R44 707 000). After taking into account dividend income and the profit realized on the sale of investments which, together, amounted to R10 699 000 (1977 — R10 132 000) and after charging the net cost of financing of R63 769 000 (1977 — R103 928 000) the Corporation incurred a loss for the year of R73 247 000 (1977 — R49 089 000).

The necessity to finance the major portion of the capital extension programme from loan capital is reflected in the Corporation's high debt ratio of 64,8% at 30 June 1978, which gave rise to the heavy financing cost burden amounting to R133 769 000 for the year under review. The State accepted R70 million of the Corporation's financing charges for the year ended 30 June 1978 for its own account, which accordingly reduced the net financing charges in the income statement to R63 769 000.

Notwithstanding the loss of R73 247 000 referred to above, it should be noted that due mainly to the fact that R79 657 000 was provided for increased replacement cost of fixed assets, 'Distributable reserves' reflected an increase of R6 377 000 to R379 119 000 at 30 June 1978.

Source and employment of capital

During the year a further 25 000 000 B shares of R2 each were issued at par to the State President, which resulted in the total issued and fully paid capital increasing from R635 200 000 to R685 200 000.

The Corporation made further stock issues, entered into loan and revolving credit agreements and utilized suppliers credit during the year, which resulted in fixed period loans increasing by R202 952 000 to R1 956 434 000. Of this amount R135 782 000 was held in liquid assets at the year-end as 'Bankers and short-term deposits'. As a result of favourable conditions that existed in both the overseas and local markets in the last quarter of the financial year, the opportunity was taken to borrow long-term funds which were in excess of the Corporation's immediate requirements. These funds will be applied to repay certain medium-term loans and to provide for the redemption payments on certain fixed period overseas and local loans of approximately R112 million which fall due for repayment in the quarter ending 30 September 1978. The excess funds have been invested in the interim.

The increase of approximately R121 million in 'Debtors' in comparison with the previous year is ascribed mainly to the R70 million due by the State in respect of recoverable finance charges, which will be paid over to the Corporation by 30 November 1978. Other contributing factors were the extended payment conditions pertaining to exports and increases in selling prices of products in the local market.

The net book value of fixed assets at the year-end amounted to R1 880 815 000 (1977 — R1 892 020 000), which included extensions under construction of R109 154 000 (1977 — R294 477 000), the major portion of which was in respect of development of the Grootegeluk coal mine in the northern Transvaal.

The additional investment in fixed assets during the financial year amounted to R94 113 000 (1977 — R294 839 000), which mainly comprised expenditure on the rounding-off of the capital extension programme embarked on in 1973/1974.

Directorate

The names of the directors in office at 30 June 1978 and at the date of this report are set out on page 1.

At a meeting of private shareholders held on 30 November 1977, Prof. D. G. Franzsen, Mr. P. K. Hoogendyk and Mr. J. J. Kitshoff were reappointed directors of the Corporation for further periods of three years.

Mr. J. P. Coetzee and Dr. J. P. Kearney were reappointed as directors by the State President for further periods of three years with effect from 1 December 1977.

Income Statement

for the year ended 30 June 1978

	Notes	1978 R000	1977 R000
Turnover		**1 308 993**	1 003 239
Net income/(loss) from trading	2	**(20 177)**	44 707
Dividends received	3	**10 686**	10 132
Profit on sale of investments		**13**	—
		(9 478)	54 839
Financing charges	4	**(63 769)**	(103 928)
Net loss for year		**(73 247)**	(49 089)
Accumulated surplus/(loss) brought forward from previous year		**42 942**	(101 936)
Net loss for year		**(73 247)**	(49 089)
Transfer from General Reserve		**—**	194 000
		(30 305)	42 975
Dividend on 7½% cumulative preference shares		**(33)**	(33)
Accumulated surplus/(loss) at end of year		**(30 338)**	42 942

Balance Sheet

at 30 June 1978

	Notes	1978 R000	1978 R000	1977 R000	1977 R000
Source of capital employed					
Share capital	5		635 200		635 200
Distributable reserves	6		379 119		372 742
Shareholders' interest			1 064 319		1 007 942
Fixed period loans	7		1 956 434		1 753 482
			3 020 753		2 761 424
Employment of capital					
Fixed assets	8		1 880 815		1 892 020
Interests in controlled and associated companies	9		260 216		272 160
Sishen-Saldanha scheme	10		60 139		98 743
Loan portion of taxation			121		854
Current assets					
Stocks and work-in-progress	11	618 422		574 531	
Debtors		319 933		198 801	
Bankers and short-term deposits		135 782		(18 405)	
			1 074 137		754 927
			3 275 428		3 018 704
Current liabilities					
Creditors		201 307		219 238	
Import/export schemes	12	4 472		(2 811)	
Shareholders for dividends		16		16	
		205 795		216 443	
Provisions					
Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses, self-insurance and sundry contingencies		48 880		40 837	
			254 675		257 280
			3 020 753		2 761 424

Notes on the Financial Statements

1. Accounting policies

This summary of the principal accounting policies of the Corporation is presented to assist in the evaluation and appreciation of the annual financial statements in which these policies have in all material respects been followed on a basis consistent with the previous year.

1.1 Constitution

The Corporation is constituted in terms of the Iron and Steel Industry Act, 1928 (as amended). The Companies Act, 1973, or any amendment thereof, does not apply to the Corporation.

1.2 Turnover

Turnover represents the invoiced sales value (excluding any import or export levies) of all products sold on the local and export markets.

1.3 Depreciation

Depreciation of fixed assets is calculated on a straight line basis at a rate determined by the expected useful life of each individual type of asset. No depreciation is provided on properties, leases and rights.

Where an asset is retired, any under-provision of depreciation required to write off the redundant or obsolete asset is charged against income. The proceeds of any sales are credited to income.

1.4 Increased replacement cost of fixed assets

In addition to depreciation, a charge based on the current wholesale price index is made to production costs to provide for the estimated increased replacement cost of fixed assets.

1.5 Provisions

The Corporation carries no outside insurance on fixed or current assets.

Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses and self-insurance are provided for by charges to production costs. When expenditure in respect thereof is incurred, such expenditure is charged against these provisions.

1.6 Expenditure on mining development

In accordance with the accounting practice generally adopted by the mining industry in South Africa, the following policies are applied in connection with expenditure on new mining development.

Financing charges and other expenditure prior to production as well as prospecting expenditure on properties which are considered viable mining areas are capitalized.

Capitalized expenditure on mining development is written off over the productive life of the mines or 20 years, whichever is the lesser period.

1.7 Financing charges

'Financing charges' represents the net cost of financing which consists mainly of interest paid on fixed period loans, reduced by interest received, financing charges recovered from the State and financing charges on new mining development capitalized.

The interest rate used to calculate the financing charges capitalized in respect of the pre-production expenditure on new mining development is based on the Corporation's average borrowing rate for the year under review.

'Financing charges' includes the cost of acquiring loans, differences resulting from foreign currency conversions, costs and commissions arising from forward exchange purchase contracts, discounts on the issue price of bonds and other expenses incurred on receipt or renewal of loans and is charged when incurred.

1.8 Site preparation

Expenditure in respect of site preparation for extensions is written off against the excess depreciation provision.

1.9 Steel used on capital extensions

No adjustment is made for profit arising on steel manufactured by the Corporation, sold at arm's

length to the trade and subsequently used by contractors on the Corporation's capital extensions.

1.10 Foreign currency conversions

Loans and suppliers credit repayable in foreign currencies and secured by forward exchange purchase contracts are converted into South African currency at the fixed rates of exchange applicable to the respective forward exchange purchase contracts.

Loans and suppliers credit repayable in foreign currencies and not secured by forward exchange purchase contracts are converted into South African currency at rates of exchange ruling at balance sheet date.

Current assets and current liabilities in foreign currencies are converted into South African currency at rates of exchange ruling at balance sheet date.

1.11 Stocks and work-in-progress

Finished products and work-in-progress are valued at current standard costs including labour, materials, manufacturing and works overhead costs.

Raw materials, consumable stores and plant spares are valued at current standards. These standards are reviewed at each year-end and on commodities for which purchases have taken place during the year, the standards are changed to the purchase prices applicable at the date of such purchases.

Rolls and moulds are valued at cost less a charge for usage and a provision for obsolescence.

Provision is made for obsolescence and depreciation on plant spares.

Appropriate provision is made where stock values are considered to exceed net realizable values. The aggregate book value is below cost.

	1978 R000	1977 R000
2. Net income/(loss) from trading	(20 177)	44 707
Net income/loss from trading is arrived at after charging —		
Depreciation of fixed assets	94 386	83 662
Depreciation under-raised on fixed assets retired	3 092	353
Increased replacement cost of fixed assets	79 657	64 200
Furnace reconditioning and renewal of short-life assets	17 527	16 095
Extraordinary operating expenses	4 269	4 079
Self-insurance	3 870	2 427
Leasing charges — plant and equipment	2 300	907
Proceeds from sale of fixed assets	(2 806)	(137)
3. Dividends received		
Listed shares	2 295	2 298
Unlisted shares	8 391	7 834
	10 686	10 132
4. Financing charges		
Net financing charges	63 769	103 928
Net financing charges is arrived at after deducting —		
Financing charges recovered from the State	70 000	—
Interest received from controlled and associated companies	14 336	11 447
Other interest received	15 968	5 515
Financing charges capitalized — new mines	7 357	13 507
Financing charges recovered — Sishen-Saldanha scheme	9 935	36 929
	117 596	67 398

	1978 R000	1977 R000
5. Share capital		
Prescribed by Iron and Steel Industry Act, 1928 (as amended)		
500 000 A shares of R2 each	1 000	1 000
500 000 000 B or preference shares of R2 each	1 000 000	1 000 000
	1 001 000	1 001 000
Authorized, issued and fully paid		
500 000 A shares of R2 each	1 000	1 000
341 880 364 B shares of R2 each	683 761	633 761
219 636 7½% cumulative preference shares of R2 each	439	439
	685 200	635 200
The unissued B or preference shares may be issued by the Board at not less than par and under such conditions as the State President may approve, provided that present holders of B shares shall have the first right to subscribe for such additional shares.		
6. Distributable reserves		
Reserve for increased replacement cost of fixed assets		
Balance at beginning of year	329 800	265 600
Charged to production costs	79 657	64 200
Balance at end of year	409 457	329 800
Accumulated surplus/(loss) per income statement	(30 338)	42 942
Net distributable reserves	379 119	372 742
7. Fixed period loans		
These loans have their scheduled repayment dates during the years ending 30 June		
— 1979	571 925	320 354
— 1980	353 088	340 632
— 1981	281 980	311 493
— 1982	172 301	182 062
— 1983 onwards	577 140	598 941
	1 956 434	1 753 482
Loans repayable in foreign currencies which are not secured by forward exchange purchase contracts —		
United States dollars	51 402	59 616
British Sterling	30 715	32 982
	82 117	92 598

	1978 R000	1977 R000
8. Fixed assets		
Properties, leases and rights	53 868	49 585
Buildings and works	708 886	622 255
Machinery, plant and furnaces	1 491 902	1 359 332
Pre-production expenditure — new mining development	67 136	26 127
Total cost	2 321 792	2 057 299
Depreciation (see (iii) below)	550 131	459 756
	1 771 661	1 597 543
Extensions under construction — at cost	109 154	294 477
Net book value	1 880 815	1 892 020
Depreciation at beginning of year	459 756	417 190
Charged to production costs	97 478	84 015
	557 234	501 205
Accumulated depreciation on assets retired	6 807	1 627
Site preparation written off —		
Current year	296	3 554
Period 1 July 1973 to 30 June 1976	—	36 268
Depreciation at end of year	550 131	459 756
(i) Certain fixed assets have been erected on property of companies wholly-owned by the Corporation	11 864	10 032
(ii) Included under 'Buildings and works' are hostel buildings and houses situated on leasehold property in the South African Bantu Trust area in terms of the leasehold agreement	4 805	4 616
(iii) Retained excess depreciation, resulting from a policy change during the year ended 30 June 1977, included in depreciation provision —		
Balance at beginning of year	29 922	33 476
Site preparation written off	296	3 554
Balance at end of year	29 626	29 922
9. Interests in controlled and associated companies		
Listed shares — at cost (market value 30 June 1978 — R18 881 000; 1977 — R18 450 000)	24 389	24 389
Unlisted shares — at cost less amounts written off. (In the opinion of the directors, the value of the unlisted shares is not less than book value)	53 315	53 573
Loans and advances		
Due to Corporation	190 540	202 603
Due by Corporation	(8 028)	(8 405)
	260 216	272 160
Comprises interests in —		
Companies whose operations form part of the main functions of the Corporation	237 349	250 048
Companies with investments in the iron, steel, engineering and allied fields	22 867	22 112
	260 216	272 160

	1978 R000	1977 R000
10. Sishen-Saldanha scheme		
Amount due by South African Railways Administration —		
Net assets transferred	—	86 227
Portion of the operating expenditure of the scheme financed by the Corporation	13 826	12 516
Loan — including accrued interest	46 313	—
	60 139	98 743

(i) The portion of operating expenditure of the scheme financed by the Corporation plus interest is repayable out of future income from the scheme.

(ii) The loan is repayable in two equal instalments on 14 December 1978 and 1979.

Interest on the loan is payable six-monthly in arrear.

11. Stocks and work-in-progress less provisions — in the aggregate below cost		
Finished products	111 453	92 120
Work-in-progress	160 595	154 255
Raw materials	35 636	35 164
Plant spares	178 814	148 181
Consumable stores	84 905	88 582
Rolls and moulds	47 019	56 229
	618 422	574 531

12. *Import/export schemes*		
Tinplate scheme	1 579	(7 634)
Steel import scheme	(1 410)	2 987
Iron and steel export scheme	4 303	1 836
	4 472	(2 811)

The above schemes are administered by the Corporation on behalf of the Department of Industries.

13. Taxation

No provision has been made for current normal taxation as the Corporation has no taxable income for the year under review.

Taxation deferred by reason of accelerated allowances on fixed assets has not been provided for as the Corporation has an accumulated assessed loss for tax purposes.

	1978 R000	1977 R000
14. Contingent liabilities		
The Corporation has —		
(i) guaranteed the principal sum and interest on loans to its housing and estate companies	**28 400**	31 400
(ii) guaranteed a loan of US $3 500 000 from a bank in the United States to Iskop (Proprietary) Limited, a company in which the Corporation had a 50% interest at 30 June 1978. The amount outstanding at the year-end	**2 712**	3 051
(iii) discounted bills receivable	**12 141**	14 657
(iv) guaranteed bank overdrafts of certain controlled companies. The amount overdrawn at the year-end	**1 033**	576
It is not anticipated that the Corporation will be called upon to fulfil any of the above obligations.		
15. Commitments		
(i) Capital commitments for extensions		
— Contracted for	**20 009**	86 420
— Authorized expenditure for which there are no negotiated contracts	**37 625**	67 942
Capital expenditure will be financed from share issues, loans and funds generated by the Corporation from normal operations.		
(ii) Leasing		
Amounts outstanding under agreements entered into for leasing of plant and equipment for the years ending 30 June		
— 1979	**3 265**	1 518
— 1980	**3 397**	1 518
— 1981	**3 004**	981
— 1982	**2 910**	729
— 1983 onwards	**19 619**	3 288
	32 195	8 034
(iii) Sishen-Saldanha scheme		
Commitment to fund a portion of the operating expenditure of the scheme for the period to 31 March 1979	**14 250**	—

Statement of Source and Application of Funds

for the year ended 30 June 1978

	R000
Source of funds	
Net loss for year	(73 247)
Depreciation	97 478
Increased replacement cost of fixed assets	79 657
Funds from normal operations	103 888
Increase in share capital	50 000
Decrease in loan to South African Railways — Sishen-Saldanha scheme	38 604
Proceeds of fixed period loans	575 741
Decrease in interests in controlled and associated companies	11 944
Fixed assets sold to Grootegeluk Coal Mine Construction Company (Proprietary) Limited	7 840
	788 017
Application of funds	
Acquisition of fixed assets	94 113
Redemption of fixed period loans	372 789
Dividend on 7½% cumulative preference shares	33
Increase in working capital	321 082
	788 017

Five-year Review 1969 - 1978 (Year ended 30 June)

Description	1978	1977	1976
Raw materials consumed (tons):			
Iron ore (including fine ore for sintering)	7 655 500	7 664 800	6 704 700
Coking coal	6 145 900	6 158 800	5 112 400
Other coal	428 300	429 600	443 200
Dolomite (raw)	1 226 100	1 280 000	1 114 000
Production (tons):			
Ingot steel	4 199 700	4 487 000	4 678 900
Continuously cast blooms/slabs	1 810 000	1 167 800	497 200
Sales (tons):			
Prime steel products*	4 401 200	3 788 200	3 587 700
Pig iron	173 100	245 100	318 200
Coke oven by-products	244 300	234 100	223 300
Operating results:	R	R	R
Net sales value	1 133 585 000	917 554 000	766 456 000
Net profit/(loss) before tax	(73 247 000)	(49 089 000)	(30 057 000)
Taxation:	—	—	—
Financial:			
Source of capital employed:			
Share capital	685 200 000	635 200 000	515 200 000
Distributable reserves	379 119 000	372 742 000	357 664 000
Fixed period loans	1 956 434 000	1 753 482 000	1 868 706 000
Current liabilities and provisions	254 675 000	257 280 000	270 492 000
	3 275 428 000	3 018 704 000	3 012 062 000
Employment of capital:			
Fixed assets			
In operation — at cost less depreciation	1 771 661 000	1 597 543 000	1 303 888 000
Under construction — at cost	109 154 000	294 477 000	905 049 000
Investments	260 337 000	273 014 000	271 039 000
Current assets	1 134 276 000	853 670 000	532 086 000
	3 275 428 000	3 018 704 000	3 012 062 000

*Excluding off-cuts and scrap.

1976	1975	1974	1973	1972	1971	1970	1969
6 704 700	6 228 700	5 968 200	5 593 000	5 668 800	4 905 800	4 073 300	4 231 100
5 112 400	4 684 100	3 980 700	3 840 800	3 806 800	3 644 400	3 173 100	3 162 100
443 200	460 900	478 000	471 000	424 600	444 600	433 700	407 900
1 114 000	1 041 600	1 036 400	1 002 200	1 006 700	886 300	631 700	584 800
4 678 900	4 349 700	4 036 500	4 052 700	3 816 300	3 478 400	3 384 000	3 350 400
497 200	306 200	20 200	—	—	—	—	—
3 587 700	3 346 300	3 135 500	2 968 200	2 659 000	2 638 200	2 676 400	2 483 600
318 200	413 300	684 700	827 700	846 900	650 200	100	144 200
223 300	188 700	140 800	145 100	144 500	154 500	158 000	147 300
R	R	R	R	R	R	R	R
456 000	601 860 000	444 840 000	372 819 000	304 067 000	291 470 000	238 480 000	219 862 000
057 000)	(35 874 000)	(37 603 000)	3 954 000	9 538 000	19 520 000	15 040 000	19 074 000
—	—	—	—	619 000	4 946 000	5 781 000	9 933 000
200 000	325 200 000	195 200 000	165 200 000	145 200 000	125 200 000	95 200 000	85 200 000
664 000	338 259 000	339 885 000	355 987 000	341 252 000	330 644 000	316 130 000	305 276 000
706 000	1 285 700 000	814 824 000	439 693 000	175 134 000	138 583 000	65 615 000	32 839 000
492 000	283 297 000	220 324 000	108 905 000	100 793 000	72 827 000	85 693 000	53 402 000
06.	2 232 456 000	1 570 233 000	1 069 785 000	762 379 000	667 254 000	562 638 000	476 717 000
888 000	1 085 971 000	737 609 000	363 075 000	332 662 000	308 799 000	288 060 000	231 862 000
049 000	552 161 000	381 001 000	311 577 000	87 214 000	37 140 000	28 970 000	31 630 000
039 000	227 121 000	179 169 000	149 623 000	142 172 000	131 774 000	127 126 000	79 553 000
086 000	367 203 000	272 454 000	245 510 000	200 331 000	189 541 000	118 482 000	133 672 000
062 000	2 232 456 000	1 570 233 000	1 069 785 000	762 379 000	667 254 000	562 638 000	476 717 000

PERSKOR-JHB

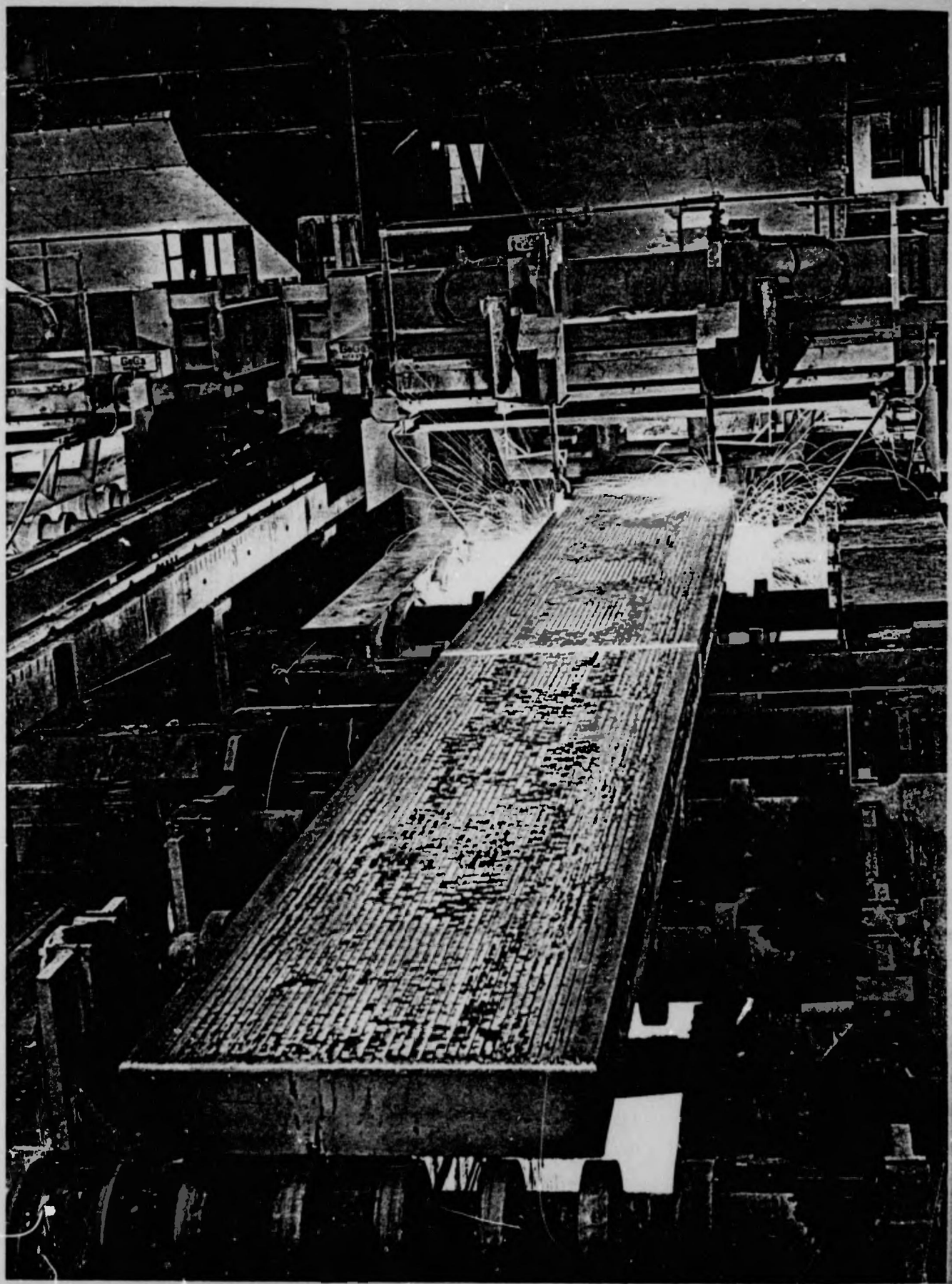
annual report 1977

South African Iron and Steel Industrial Corporation, Limited

(Constituted and incorporated by Act of Parliament in the Republic of South Africa)

Board of Directors	Dr. T. F. Muller, Chairman Mr. J. P. Coetzee (Managing) Prof. D. G. Franzsen Mr. P. K. Hoogendyk Dr. J. P. Kearney Mr. J. J. Kitshoff Dr. M. D. Marais Prof. H. J. Samuels Mr. J. J. Vermooten
Managing Director	Mr. J. P. Coetzee
General Manager	Mr. K. R. Rümelin
Divisional General Managers —	
Mining	Mr. M. J. Deats
Supplies	Mr. L. Duncker
External Interests	Mr. H. C. H. Hutten
Steel Marketing	Mr. P. A. Olivier
Mining Products Marketing	Mr. P. J. C. Pretorius
Finance and Business Services	Mr. L. van Zyl

(Hierdie verslag is ook in Afrikaans beskikbaar)



Continuously cast slabs being cut to length. Continuous-casting machines are in operation at both the Vanderbijlpark and Newcastle Works.

Notices of Meetings

Annual General Meeting of Private Shareholders

Notice is hereby given that the annual general meeting of private shareholders (holders of B shares or preference shares) of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, on Wednesday, 30 November 1977, at 09h00 for the following business:

1. To nominate an auditor in accordance with Section 14(1) of Act No. 11 of 1928, as amended.
2. To elect three directors in terms of Section 3(1)(b) of Act No. 11 of 1928, as amended.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

By order of the Board
A. C. Greyling
Group Secretary

Iscor Headquarters
P.O. Box 450
Pretoria 0001

17 October 1977

Forty-Eighth Annual General Meeting

Notice is hereby given that immediately after the annual general meeting of private shareholders convened for 09h00 on Wednesday, 30 November 1977, the annual general meeting of shareholders of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, for the following business:

1. To receive the balance sheet and report of the directors for the year ended 30 June 1977.
2. To transact such other business as may be transacted at an annual general meeting of shareholders of the Corporation.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

By order of the Board
A. C. Greyling
Group Secretary

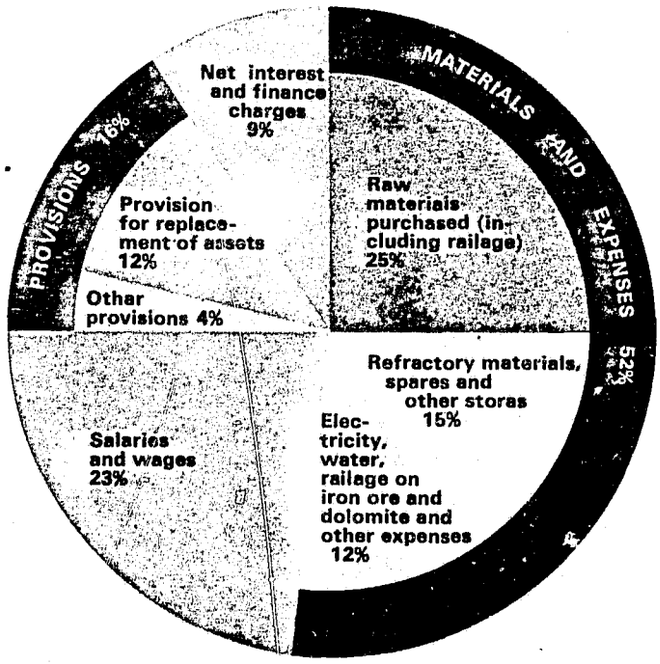
Iscor Headquarters
P.O. Box 450
Pretoria 0001

17 October 1977

At a Glance

(Figures rounded off to nearest thousand)	1977	1976
Steel production	**5 655 000 tons**	5 176 000 tons
Prime steel products sold	**3 788 000 tons**	3 588 000 tons
Net sales revenue (all products)	**R 917 554 000**	R 766 456 000
Gross trading profit	**R 108 907 000**	R 100 837 000
Reserve for increased replacement cost of fixed assets	**64 200 000**	49 495 000
Net trading profit	**44 707 000**	51 342 000
Other income/provision (net)	**10 132 000**	6 258 000
	54 839 000	57 600 000
Financing charges	**103 928 000**	87 657 000
Net loss for year	**R 49 089 000**	R 30 057 000
Capital expenditure — during year	**R 294 839 000**	R 637 910 000
Fixed assets (net value) — at year-end		
— in production	**R 1 597 543 000**	R 1 303 888 000
— under construction	**294 477 000**	905 049 000
	R 1 892 020 000	R 2 208 937 000
Source of funds employed		
— shareholders' interest	**R 1 007 942 000**	R 872 864 000
— fixed-period loans	**1 753 482 000**	1 868 706 000
	R 2 761 424 000	R 2 741 570 000

PERCENTAGE DISTRIBUTION OF TOTAL COST: 1976/77


MATERIALS AND EXPENSES 52%
PROVISIONS 16%
Net interest and finance charges 9%
Provision for replacement of assets 12%
Other provisions 4%
Raw materials purchased (including railage) 25%
Refractory materials, spares and other stores 15%
Electricity, water, railage on iron ore and dolomite and other expenses 12%
Salaries and wages 23%

Statement by the Chairman

TO THE SHAREHOLDERS

Since 1974 the free world has been struggling to surmount the protracted and severe economic recession. The latest estimates of the Organization for Economic Co-operation and Development show that the seven major industrial countries of the OECD (United States of America, Federal Republic of Germany, Japan, France, United Kingdom, Italy and Canada) will, in the near future, experience a slight real economic growth, that price inflation will remain high, unemployment will rise and hardly any new fixed investments will be made.

In addition, balance of payment deficits, aggravated by the effects of the oil crisis, forced some of these industrial countries to introduce restrictive economic measures which put a damper on their possible economic development. Consequently, a general revival before the end of this year is virtually impossible and the chances of recovery in 1978 are not promising at all.

Against this background, the steel industry in Western countries and Japan is passing through difficult straits, some countries even experiencing negative growth. The demand for steel is extremely poor, with the result that most steel manufacturers are producing far below their production capacities — in a few cases only 60 per cent of capacity is utilized, as compared with Iscor's 80 per cent at the end of the financial year. In an effort to achieve greater capacity utilization, many countries are exporting to foreign markets at particularly low prices, in some instances at only just above variable cost. As a result, there are some primary steel industries in developed countries in the Western world which operate at great loss. In some cases they are even dependent on Government assistance, whilst others are faced with the threat of going under.

The local steel industry has also been caught in the downward economic cycle, the end of which is not yet in sight. In view of the fact that steel is sold at controlled prices within the Republic, it is a prerequisite for Iscor that the existing capacity be fully utilized and that about 90 per cent of the steel produced be sold locally at current prices if the Corporation is to operate profitably. However, the present economic climate makes this impossible.

The most important single factor responsible for the present difficult situation in the local primary steel industry, is the drastic decline in the domestic demand, which is closely related to the declining cyclical phase of the national economy. Low levels of demand occur in respect of virtually all the steel consuming sectors.

During the past year, steel consumers largely reduced their stock reserves. In the case of profile products, stock levels have shown a declining trend since 1976, whilst a sharp drop occurred in flat products between October 1975 and May 1976. After that, stocks remained at a more or less constant level.

As mentioned in previous reports, the Corporation some years ago undertook major extensions at its works and mines. This was done in accordance with the projected domestic long-term demand at the time, to enable it to meet, as far as possible, the expected rise in the domestic demand for its steel products. The extensions were to prevent the Republic's ever again becoming dependent to the same extent as in the past on expensive imported steel for eliminating local shortages. However, the commissioning of the latest production units — a process requiring an average of five years from the date the decision is taken to expand — coincided with an unprecedented trough in the domestic cyclical phase and the resultant drop in the local demand for steel.

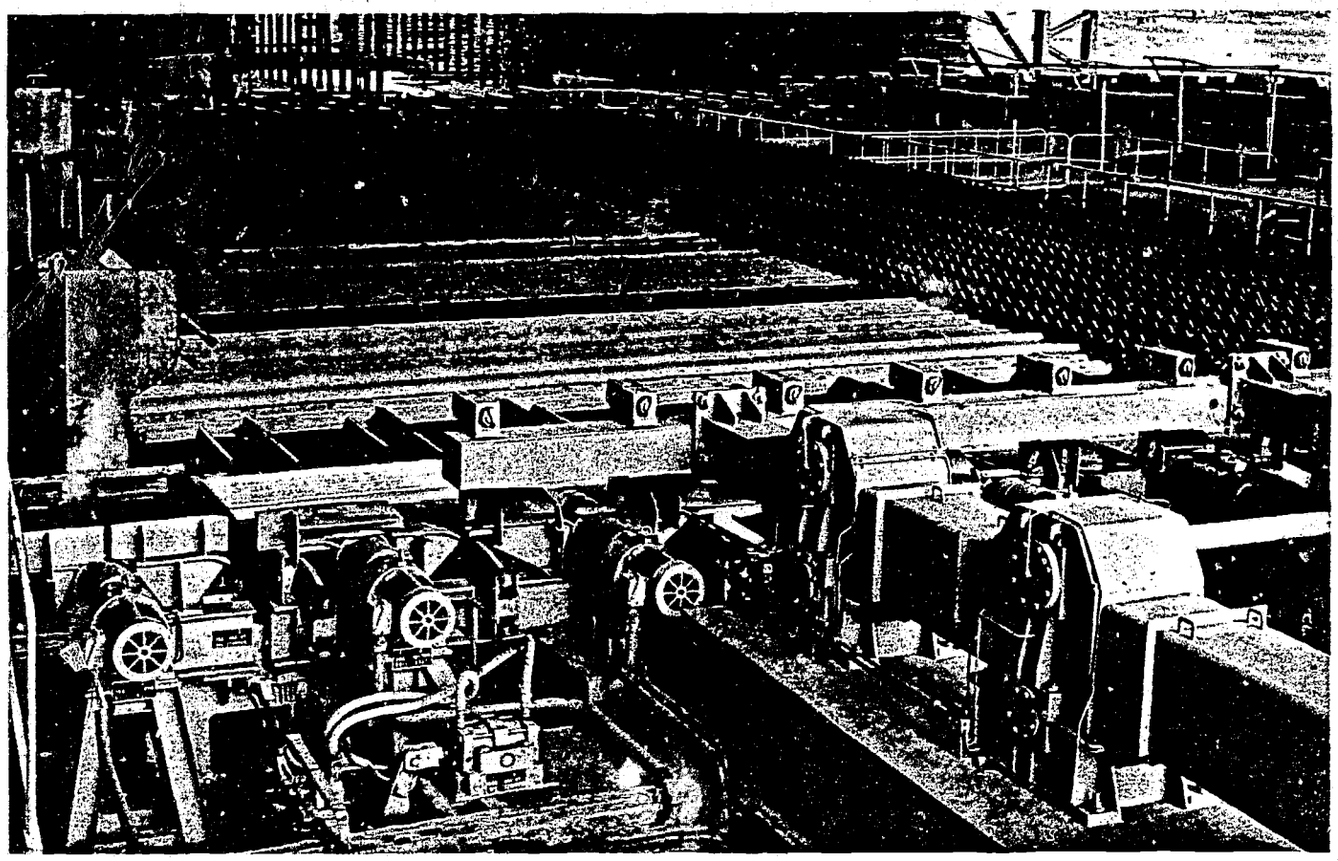
Since the export market for primary steel products has lately not been capable of fully absorbing the surplus domestic production, considerable process stocks had already accumulated at the three works at the beginning of the financial year and the Corporation was forced to curtail its iron and steel production for the time being. Steel exports for the 1977 calendar year are nevertheless expected to amount to about 1,5 million tons, but it must be borne in mind that prices in overseas countries are relatively low as a result of keen international competition. In addition, Iscor's exports are, for geographical reasons, also subject to high railage and freight charges.

It is nevertheless still more advantageous to export steel at lower prices rather than withdraw expensive equipment from production and retrench skilled employees. In this manner, both variable and part of fixed costs are recovered, whilst valuable foreign currency is earned. However, the low prices and high transport costs have had a drastic effect on the Corporation's financial results for the year under review.

FINANCIAL RESULTS

Iscor's accounting policies, laid down when it commenced operations in 1934, were subjected to an in-depth study by an eminent outside consultant during 1952. The policies in so far as revision was proposed by this consultant, have been followed ever since and have served the Corporation well in all respects. The whole approach was one of conservatism, and during a period when inflation was hardly a consideration, Iscor took the lead in South Africa by making provision, as a charge against production costs, for the eventual higher costs of replacing its production units.

A recent survey revealed that even under present highly inflationary conditions, few South African quoted industrial companies are making this provision. Only one overseas primary steel producer is known to be doing so. Iscor considers this provision more important than ever before, and in the 1976/77 financial year alone an amount of R64,2 million (1975/76: R49,5 million) was treated as a legitimate cost factor before the financial results for the year were arrived at. Since the commencement of the practice up to the end of the financial year an amount of R329,8 million had in this way been provided as a charge against production costs for future replacement. Until required for that purpose, this reserve is available as a useful source of financing the Corporation's requirements.



The cooling bed at the finishing end of the billet mill in the Newcastle Works.

This provision, like other conservative accounting practices which the Corporation has applied since 1952 has, at times, been lost sight of when comparing Iscor's results with those of other companies. Since 1952 the steel industry has also seen significant technological advances, resulting in a far clearer picture of the useful life and technological capability of production plant. With the aid of a well-designed computer programme introduced earlier this year, Iscor is now in a position to control every individual item of plant on a mono-asset basis.

Bearing in mind all these considerations it was deemed advisable, for the financial year, to review all Iscor's accounting policies thoroughly and to adjust them, where necessary, with a view to presenting the Corporation's results in a fair light.

Apart from the fact that the Corporation, as mentioned before, considers providing for the eventual increased replacement cost of its assets as absolutely vital in present-day inflationary conditions, it was nevertheless thought feasible to change some of the other policies. The changes effected are explained fully in the Annual Financial Statements on pages 22 to 32.

The financial results for the year under review, set out below, incorporate the effect of the accounting policy changes made. The net income from trading of R44 707 000 is arrived at after charging the above R64,2 million for increased replacement cost of fixed assets.

	1976/77 R000	1975/76 R000
Turnover	1 003 239	799 005
Net income from trading	44 707	51 342
Dividends received	10 132	7 768
Profit on sale of investments	—	117
	54 839	59 227
Provision for writing down an investment	—	(1 627)
Financing charges	(103 928)	(87 657)
Net loss for year	(49 089)	(30 057)

The drop in trading profit compared with the previous year was due essentially to two major factors: first, the effect of the high rate of inflation on the Corporation's cost structure, and secondly, the adverse effect of recessionary conditions in South Africa which was reflected by a low domestic demand for steel products. This low demand forced Iscor to increase its export sales but at prices lower than domestic prices.

Moreover, the factor of unutilized production capacity has to be considered. As a result of the commissioning of large new production units which cannot be operated at normal capacity during the running-in period, as

well as temporary bottlenecks and disequilibriums which are bound to occur during a major expansion phase, it was not possible to optimize the use of the additional capacity which became available during the year. This meant, in turn, that considerable costs in respect of depreciation and labour in particular were experienced during the year, without a corresponding increase in steel production. It must further be borne in mind that financing charges are written off in any case, even during the construction period. This cost of unutilized production capacity amounted to more than R50 million in the case of the Newcastle Works alone during the financial year.

After taking into account the many adverse factors, the overall net loss for the financial year, after charging financing costs of R103 928 000 (1975/76 : R87 657 000) and reserve for increased replacement cost of fixed assets of R64 200 000 (1975/76 : R49 495 000), amounted to R49 089 000 (1975/76 : R30 057 000).

BALANCE SHEET AND FINANCING PROGRAMME

The Sishen-Saldanha scheme was sold to the South African Railways Administration with effect from 1 April 1977. The transaction involved the take-over of fixed assets to the value of approximately R528 million, together with other sundry current assets and liabilities. In partial settlement of this, loans to the value of approximately R439 million were transferred.

Although all the transactions in respect of the agreements for cession of these loans to the Railways Administration had not been finalized at 30 June 1977, the Administration had nevertheless legally accepted full responsibility for the servicing of these loans, and they have therefore been treated in the accounts as if the cession had been completed at that date. No profit or loss arose on the transfer of the scheme. The balance owing by the South African Railways in respect of the take-over, plus interest, is repayable to the Corporation before 30 June 1978.

Iscor also operated the railway line and harbour activities on behalf of the Railways Administration for the period from 1 July 1976 to 31 March 1977 and financed operating expenditure up to 31 March 1977 to an amount of approximately R12,5 million. This amount, plus interest, is repayable to the Corporation out of future income from the scheme.

Owing to the present economic conditions, capital expenditure for the year, mostly on rounding-off operations, was reduced to R295 million, compared with R638 million for the previous year. If capital expenditure in respect of the Sishen-Saldanha scheme is excluded, the comparative expenditure for 1975/76 would amount to R431 million.

During the year under review, the Government contributed further share capital to an amount of R120 million. The result was that, together with the amounts transferred to "Distributable reserves" during the year, shareholders' interest, despite the loss shown during the year, actually rose by R135 078 000 to R1 007 942 000. It continues to be the Government's aim, notwithstanding the conservative price policy followed in the national interest, not to allow the Corporation's shareholders' interest to be watered down.

This fortifying of shareholders' interest, together with the alienation of the Sishen-Saldanha railway line and harbour, resulted in the fixed-term loans over the year, despite the additional expenditure of R236 million in operating capital and R295 million in fixed investment, dropping by R115 224 000 from R1 868 706 000 to R1 753 482 000 and the debt ratio improving from 68,16 to 63,49 per cent.

After the end of the financial year, Iscor received offers from various parties, independently of one another, for its 10 685 612 shares in SA Manganese Amcor Limited (Samancor). The matter was referred to the Government which, after due consideration of all the relevant factors, requested the Corporation not to accept any of the offers and to maintain its present shareholding in Samancor.

Each of these offers was for amounts several times the book value of the shares and would consequently, if accepted, have brought Iscor a considerable capital profit. These facts prove that the conservative accounting policy which the Corporation has always followed, namely to show assets at original cost price (or, where necessary, at original cost price less depreciation), has been basically sound and has resulted in Iscor assets to a large extent at present being reflected in the balance sheet at much lower values than current replacement value.

PRICE POLICY

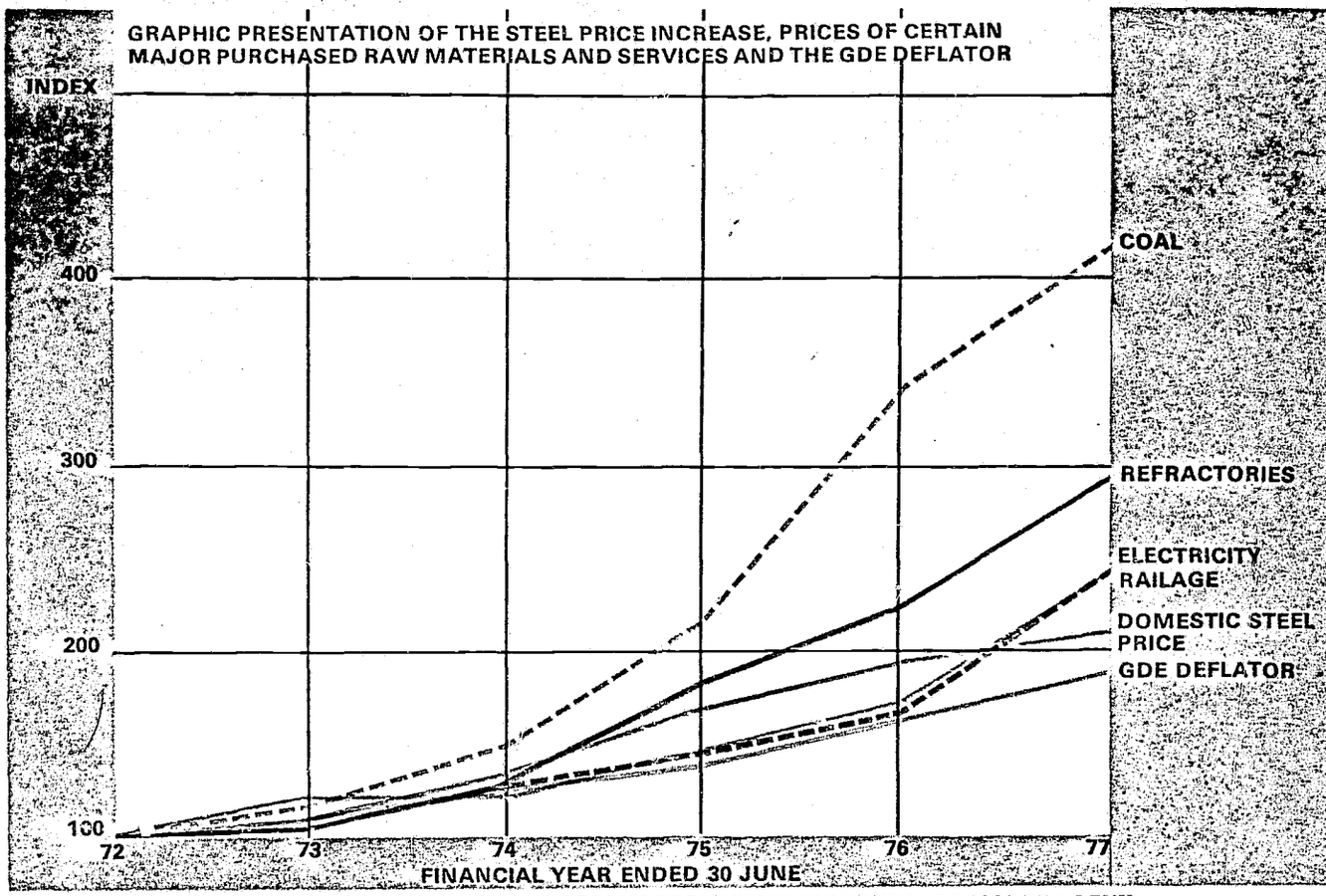
In last year's statement, a clear stance was taken on the steel price policy of the past, and that view is still maintained. From 1952 to the beginning of 1970 there was no marked increase in the controlled prices of South African steel products. It means in fact that the Republic's basic steel industry during that period largely encouraged the development of the country's steel processing industries by way of a relatively low general steel price, but to the detriment of the steel industry itself. However, this state of affairs has changed since 1970, and steel prices were increased fairly rapidly and at relatively short intervals, thus in turn creating problems for secondary industry. As from 3 December 1976 this price adjustment process has been temporarily interrupted as part of the country-wide campaign to curb the vicious circle of inflation.

However, it is desirable that a realistic policy of regular price adjustments, probably on an annual basis, be resumed in due course if it should appear necessary.

COST REDUCTION AND PRODUCTIVITY IMPROVEMENT

During the year, serious attention was still given to cost reduction and productivity improvement.

The principle applied in this connection was that costs and expenditure in the short term were reduced and/or postponed, even in cases where it could, in the longer term on account of increased reconditioning and replacement costs, have detrimental consequences. Considerable success was achieved during the year with the cost reduction effort, but unfortunately it was counteracted by the sustained increases in the unit cost of production factors.



THE FOUR COST ITEMS SHOWN ABOVE, AT PRESENT REPRESENT APPROXIMATELY 30 PER CENT OF THE TOTAL PRODUCTION COST OF STEEL

So, for example, the increases in rail tariffs on 1 September 1976 and 1 April 1977, together with the increases in electricity tariffs on 1 September 1976 and 1 January 1977, as well as the increases in the prices of coking coal and refractories since July 1976, have added in total about R16 per ton to the cost of saleable steel. If these increases are calculated on a year basis at the present rate of production, their sum amounts to approximately R75 million. (It was already announced in September this year that Escom's electricity tariffs would be further adjusted on 1 January 1978. The tariff increases concerned will mean a further rise in cost for Iscor of about R600 000 a month.)

The above-mentioned cost increases to which the steel industry was subject during the year under review, were once again — as in previous years — much higher than the general rate of inflation, as reflected in the GDE deflator. (GDE = Gross Domestic Expenditure)

The efforts to improve productivity were further adversely affected towards the end of the year under review by the deliberate curtailment of production as a result of the slump in the steel market and an inability to export the larger surpluses within a relatively short time. Smaller and irregular orders, which are uneconomical, were characteristic from the beginning of the export programme and inevitably led to inefficient works operations. Nevertheless, labour productivity improved considerably compared with the previous year. This improvement represents a continuation of the trend maintained during previous years. In addition, throughput yields at the Vanderbijlpark and Newcastle Works increased, mainly as a result of the commissioning of modern continuous casting machines.

The consumption rate of coke likewise showed an improvement during the year in comparison with the previous year. Factors which contributed towards this improvement were better blast furnace operation, increased utilization of sinter in blast furnace mixtures and, to a lesser extent, the relatively small tonnage of better quality coking coal obtained mainly from overseas. However, in contrast with these productivity improvements, rolling equipment was not fully utilized, in accordance with the deliberate curtailment of iron and steel production.

The productivity of labour and materials should improve even further, and so should the utilization of equipment when marketing conditions again permit the maintaining of optimum production levels.

Employees actively contribute to cost savings by means of existing schemes.

IRON AND STEEL PRODUCTION

Total blast furnace production amounted to 5 118 457 tons, as compared with 4 542 546 tons in the previous year. This represents an increase of 575 911 tons, or 12,7 per cent. To this total the Vanderbijlpark, Pretoria and Newcastle Works contributed 2 344 887, 1 390 630 and 1 318 295 tons of liquid iron, respectively, whilst 64 645 tons of liquid ferro-manganese were produced by the Newcastle Works.

The joint liquid iron production used for pig iron and the production of steel, shows an increase of 574 086 tons, or 12,8 per cent, over the comparative figure for the previous year. The production of ferro-manganese

amounted to 56 870 tons, as against 55 988 tons last year.

Liquid steel production totalled 5 810 221 tons, which is 501 833 tons, or 9,5 per cent, higher than the figure for the previous year. The useable production of ingots, in the conventional ingot mould, and blooms and slabs, by means of the more recent continuous casting process, amounted to 4 486 992 and 1 167 830 tons, respectively.

STEEL MARKETING

Sales revenue

The turnover for the year totalled R1 003 239 000, which resulted in a net sales value of R917 554 000, as compared with R766 456 000 in the previous financial year. This represents an increase of 19,7 per cent. The 3 788 249 tons of prime steel products sold, with a value, f.o.r. works (excluding export levy), of R824 493 962, show increases of 5,6 and 13,9 per cent, respectively, in comparison with the previous year.

The price increase which became effective on 3 December 1976, is calculated to have contributed about R27 million to the sales value of steel products and pig iron.

Sales of steel products

The following is an analysis of steel sales according to broad product groups:

Product group	Tons	
Semi-finished products (semis)		341 800
Profile products:		1 193 000
Structural sections, bars and coiled rounds	532 600	
Rails and fishplates	231 700	
Wire rod and wire	421 300	
Forgings	7 400	
Flat products:		2 253 400
Plate	505 300	
Uncoated sheet	1 111 900	
Strip	52 500	
Galvanized sheet	325 200	
Tinplate and blackplate	257 600	
Colour-coated sheet	900	
Total		3 788 200

The above figures include 37 120 tons of steel products with a sales value, f.o.r. works, of R8 157 546, used by the Corporation for its own extensions.

Coils of Chromadek prepainted sheet at the Vanderbijlpark Works, packed for dispatch.

Domestic steel supply

During the year an estimated total of 3 478 000 tons of rolled, drawn and forged steel products from South African and overseas sources was supplied to consumers in the local market. This is a decrease of 1 079 200 tons, or 23,7 per cent, as compared with the adjusted total of 4 557 200 tons supplied during the previous year.

Of the 3 478 000 tons, Iscor supplied 2 633 700 tons or 75,7 per cent and other South African producers 776 300 tons or 22,3 per cent, whilst 68 000 tons or 2,0 per cent was imported. The comparative adjusted percentages for the previous year are 71,3, 22,7 and 6,0, respectively.

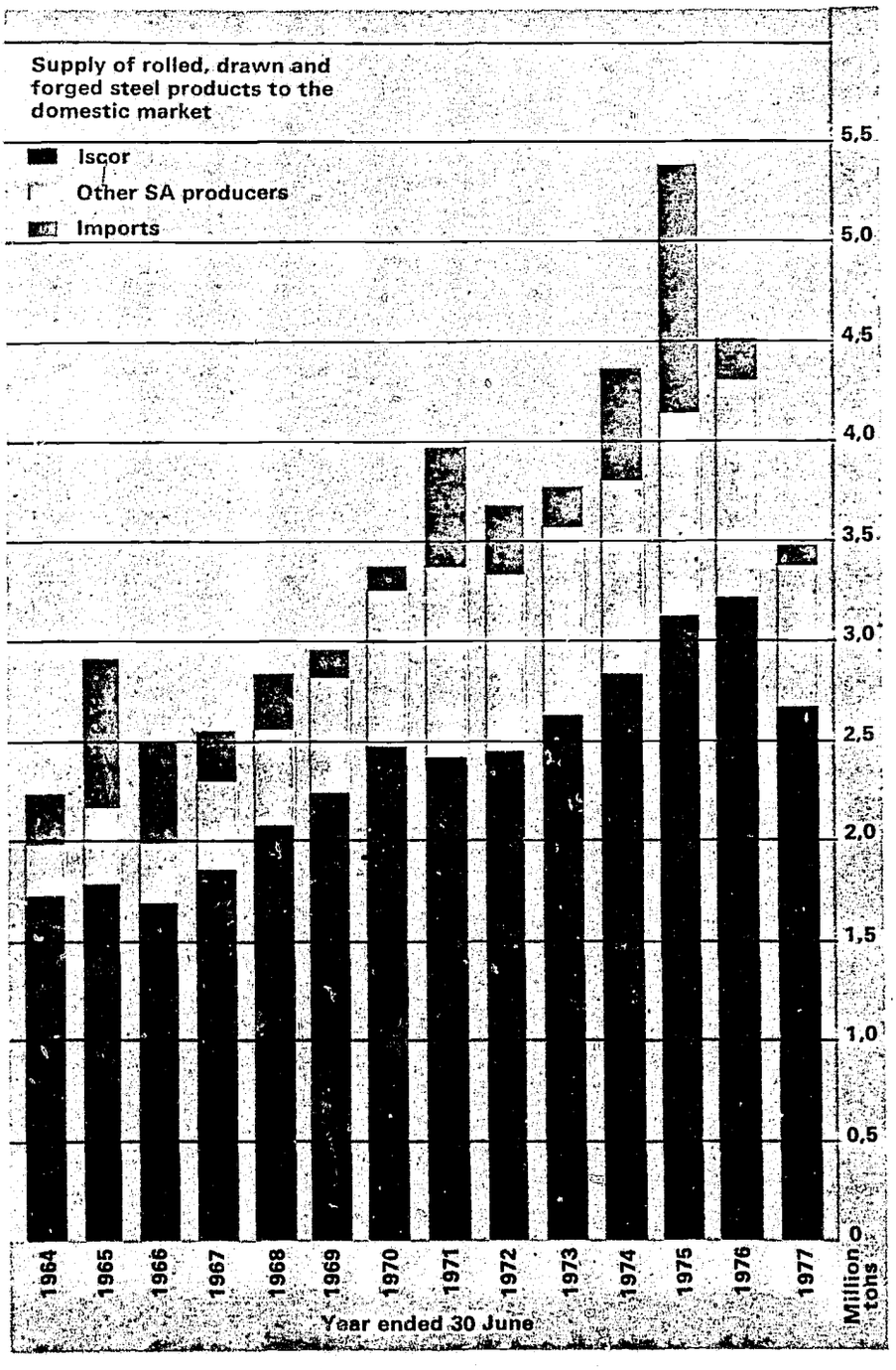
Of the tonnage obtained from South African sources, the Corporation supplied 77,2 per cent and other steel producers jointly 22,8 per cent, as compared with 75,9 and 24,1 per cent, respectively, in the previous financial year.

Price increase

The price increase by an average of 8,8 per cent, or R20,23 per ton net, in the official price of South African manufactured primary steel products, which became effective on 3 December 1976, was applied selectively to the various product groups by percentages ranging from 5 to 12,5.

In order to maintain the mutual price relationships within the product ranges, the extras and deductions were adjusted by the same percentages as the basis prices of the individual products.

The price of pig iron was adjusted with effect from the same date, and it was applied selectively to the different grades by percentages ranging from 5,9 to 12,7.



Demand

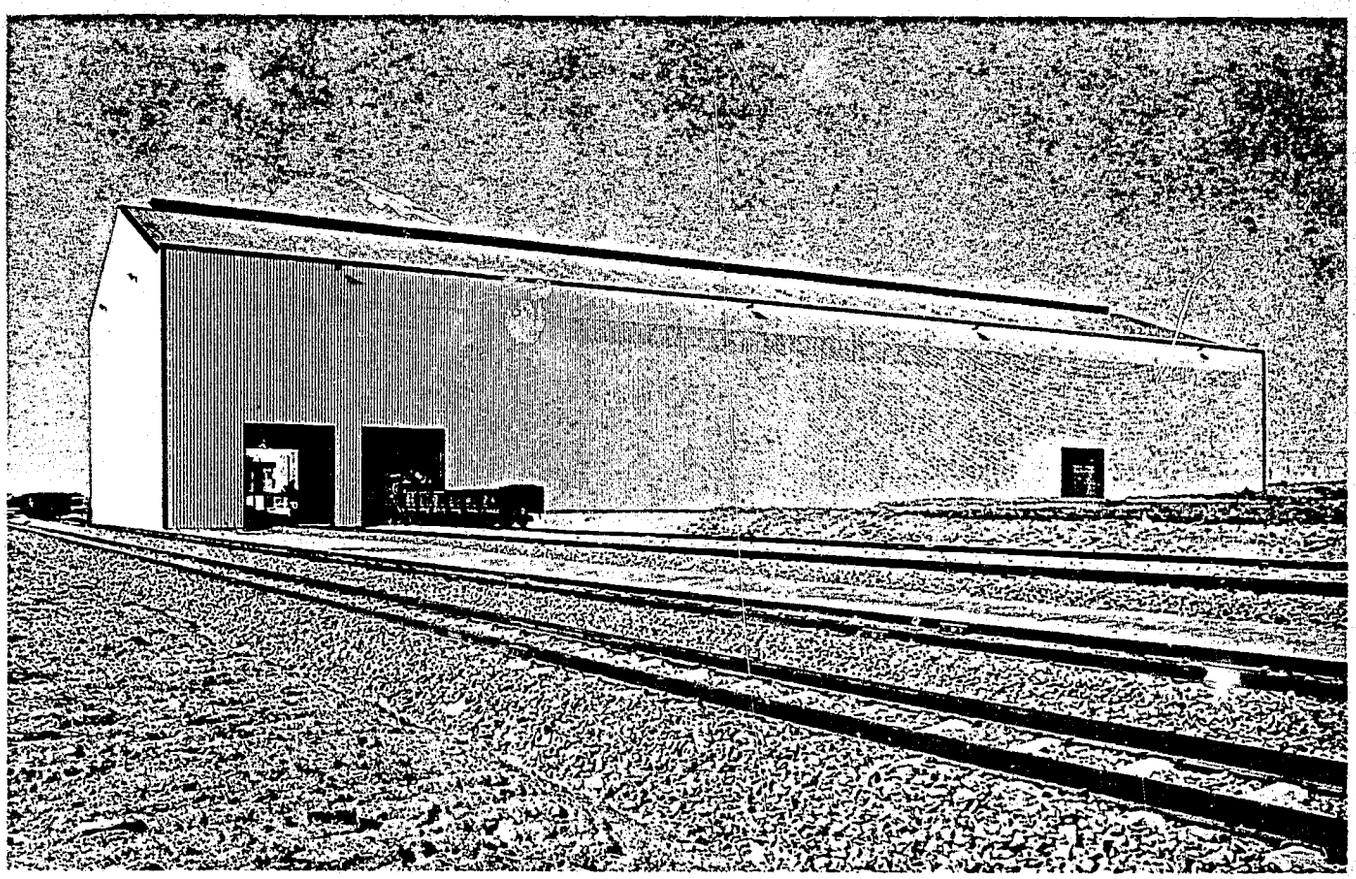
The domestic demand for steel does not follow an even course. The high demand of 1965 was followed by a year in which the demand was particularly low. Although it showed another steady increase after 1967, the 1965 level was not exceeded again before 1969. In 1971 there was another strong demand, followed by a poor demand in 1972. However, the economic boom conditions which started to build up from 1973 onwards and lasted until 1975, resulted in the demand for steel rapidly recovering from the 1972 trough. Since then there was a steep increase in demand up to 1975, followed by a sharp drop. (See accompanying graph.)

Despite the above trends, Iscor's tonnage of dispatches to the local market dropped by only 7,5 per cent from 1975 to 1976, as compared with a decline of 22 per cent experienced in the total national demand. Notwithstanding the fact that 1976 was considered all round to be a poor year, the Corporation's dispatches to the local market during that calendar year were higher than in all the preceding years, with the exception of 1975, owing to import replacement.

Electric sheet

After Iscor had discontinued, for economic reasons, the production of electric sheet for the manufacture of electric motors during 1969, the local industry was totally dependent on imports of this product.

Since this is regarded as a strategic product, however, its production was resumed on an experimental basis during the financial year. The product is supplied to manufacturers of electric motors in a semi-finished state, and they undertake the final finishing themselves. It is estimated that this



Iscor's warehouse at Berlin. It is roofed and clad with Chromadek coloured sheeting.

product will meet approximately 75 per cent of local requirements.

Berlin warehouse

The warehouse erected by Iscor on the instructions of the Government at Berlin, near East London, was commissioned at the end of January 1977.

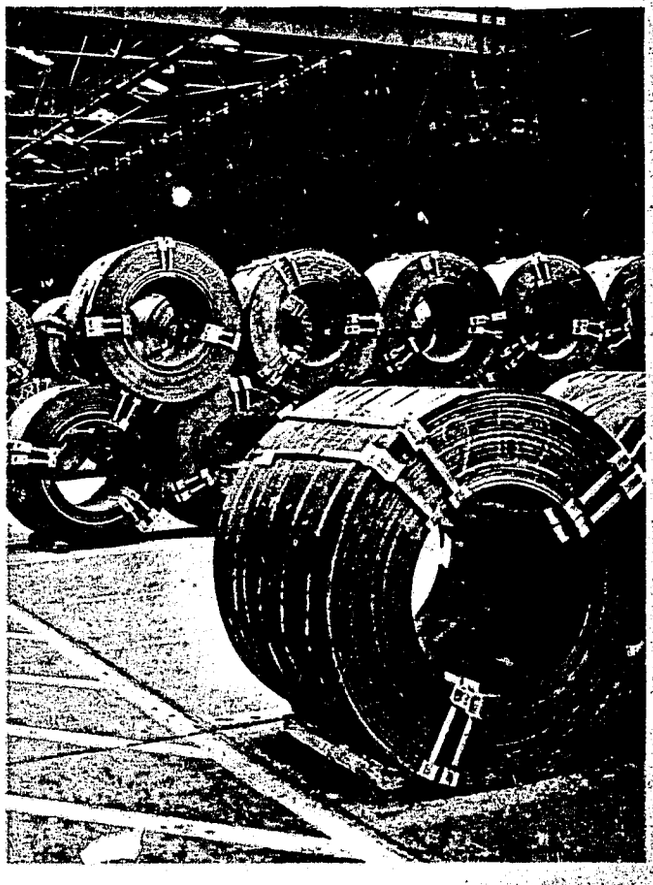
The object of the warehouse is to encourage entrepreneurs to establish steel-processing industries in the area, including Transkei and Ciskei, and to assist with the provision of a wide range of primary steel products to industrialists for processing into secondary products. The steel is at present not available to the trade or to individuals.

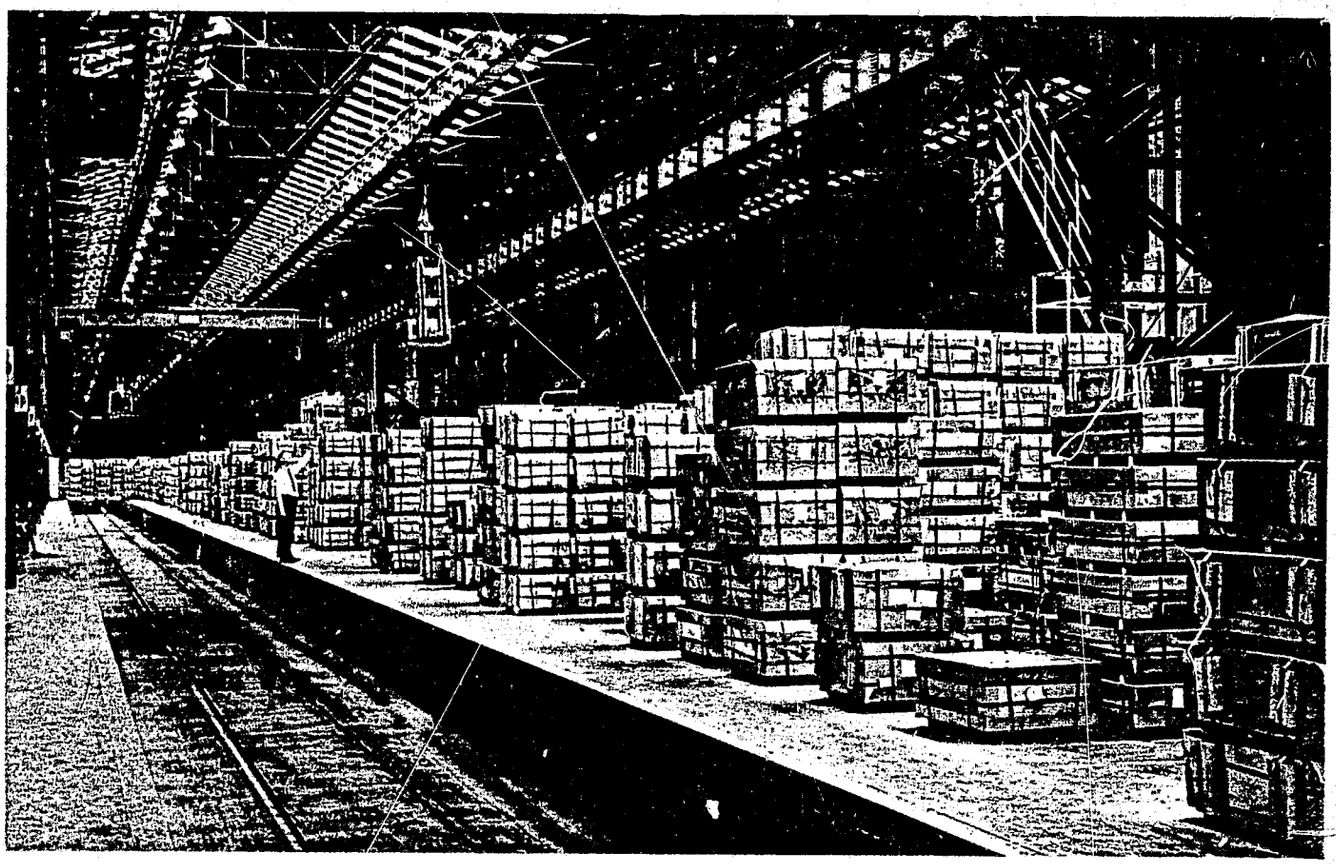
Steel exports

In order to achieve the maximum utilization of the Corporation's production units, 1 089 000 tons of miscellaneous steel products were exported during the financial year.

Export efforts were temporarily curtailed from February 1977 at the request of the countries of the European Common Market, owing to the general recession in the demand for steel in the countries concerned. The result was that the rate of exports by all South African steel producers to those countries has had to be drastically cut for the remainder of the 1977 calendar year and up to March 1978. Alternative markets had subsequently to be found in a hurry, which proved successful to some extent during the financial year.

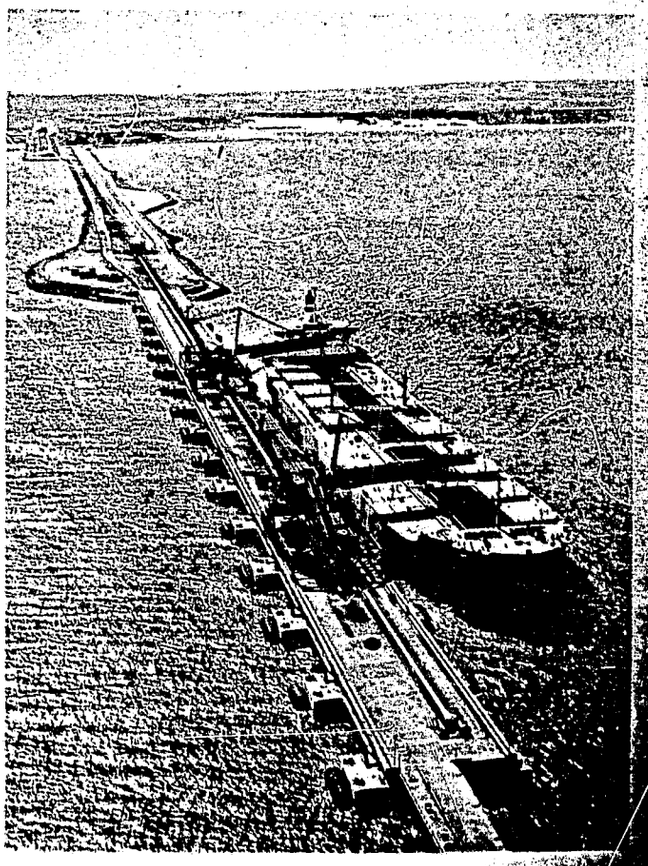
Coils of hot-rolled sheet, produced at the Vanderbijlpark Works and destined for the export market.





Packed electrolytic tinplate for export, ready to be dispatched from the Vanderbijlpark Works.

Sishen iron ore being loaded into a giant carrier at the Saldanha Bay terminal.



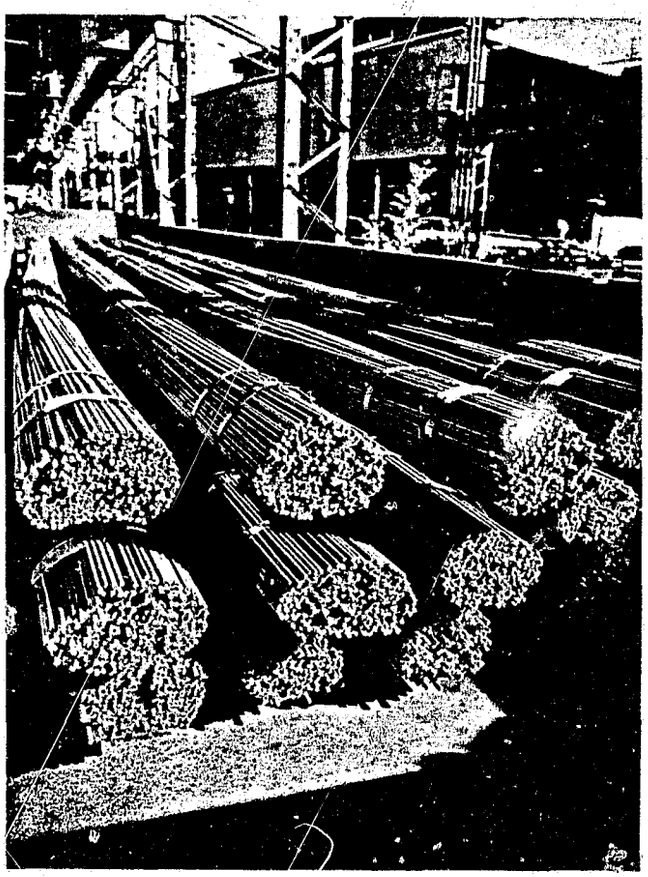
Iron ore exports

Ore exports through Port Elizabeth were continued until the harbour facilities at Saldanha Bay were commissioned on 24 September 1976. During the financial year, 6 886 000 tons (wet basis) of ore, with an estimated f.o.b. invoice value of R90 152 000, were shipped, of which 6 738 000 tons were exported through Saldanha Bay. Dispatches are effected mainly in terms of contracts for periods ranging from 7 to 12 years. The whole project for the exporting of ore through Saldanha Bay has to date been running smoothly.

Alienation of the Sishen-Saldanha railway line and harbour

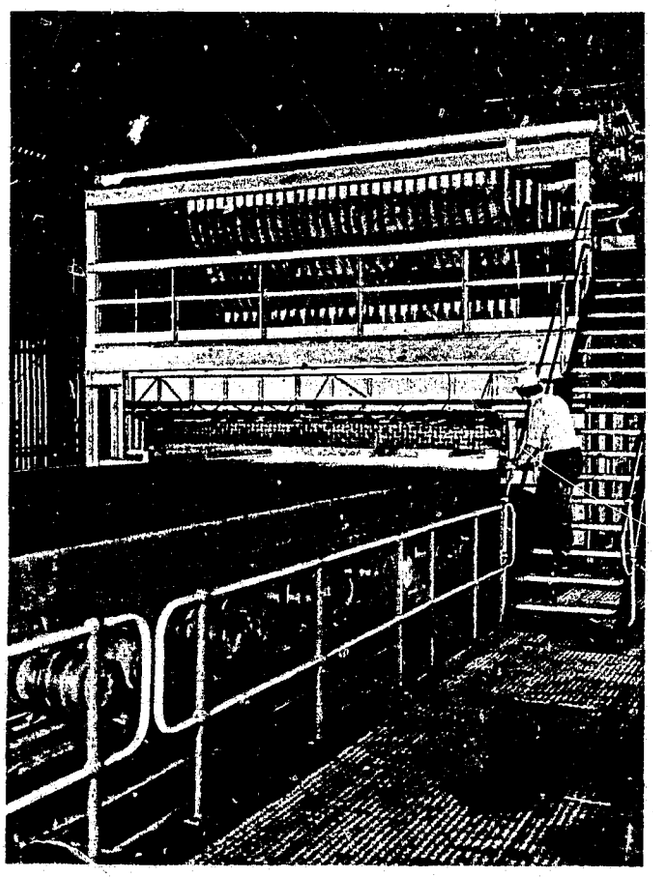
In consequence of the mining development in the northern and north-western Cape Province, several ore exporters intimated that they also wished to avail themselves of the railway and harbour facilities to effect bulk ore exports to their overseas customers. This would have made Iscor a public carrier and was therefore the main reason why the Sishen-Saldanha railway line and the harbour were transferred to the South African Railways.

The transfer should in no way lead to an increase in the transport and harbour tariffs. The tariffs are based on a formula and are not subject to normal SAR tariff increases. The railway line and harbour were specially constructed for the bulk transporting of ore, which will continue to receive preferential treatment, and the SAR has undertaken to operate these facilities as far as possible to Iscor's specifications and planning.



Reinforcing bar, produced at the Pretoria Works, loaded into a rail wagon for dispatch.

The ignition hood of the new sinter plant at the Newcastle Works.



Export promotion of processed steel products

The Corporation's steel price policy in respect of its own export promotion scheme — not to be confused with the official steel export scheme of the Department of Industries — is adapted to the current unfavourable domestic economic conditions by comparing the competitive position of processed steel products on the export markets with that of primary steel products.

Instead of exporting all the available tonnages of primary steel products at the current unfavourable prices, special concessions are made in respect of domestic prices to South African exporters of secondary products, as well as to the manufacturers of secondary products who, owing to the present poor economic conditions abroad, were obliged to discontinue their exports. In this manner the Corporation endeavours to render direct assistance on a temporary and selective basis to the South African steel-processing industry, so as to enable it to enter export markets or to maintain itself in those markets.

This assistance by Iscor is negotiated individually with customers on an *ad hoc* basis, in proportion to the viability and long-term feasibility of each project. The assistance is rendered by way of preplanned tonnages over a specified period, with two provisos. First, the rebates thus determined will be reduced in proportion to any increase fetched in the actual export price of the secondary product and, secondly, the resultant net f.o.r. works price for the steel thus determined, should also not be lower than the corresponding export price of the primary steel product.

It is estimated that these exports of secondary steel products are earning three to four times as much foreign currency as the per-ton equivalent of primary steel products at present export prices. Total price concessions approved since the introduction of the Iscor assistance scheme early in 1976 up to the end of the year under review, related to 152 000 tons of steel products. On this basis, therefore, it was utilized locally by secondary steel industries, instead of having left the country in unprocessed form.

DAMPING MEASURES AND EXPANSION

In its planning, Iscor has always had to make a compromise to avoid expanding either too slowly or too rapidly. Last year it was announced that the Corporation was rounding off the expansion programme with which it had started in 1970, and that such a programme would be continually adapted to changed circumstances. This policy was pursued also during the financial year. As a result of the poor international and local economic conditions, the Corporation was obliged to curtail drastically even further the envisaged extensions in respect of its iron and steel manufacture.

In an integrated iron and steel industry it is essential for techno-economic reasons that extensions to certain production units which play a key role, be effected in large steps, capacity and capital-wise. It is therefore not possible to maintain a full capacity balance throughout between all the units mutually.

The curtailment and consolidation programme being followed at present, invoives the limiting of capital expenditure to a minimum. For the time being, only the completion of certain current projects to which Iscor is already committed is being proceeded with.

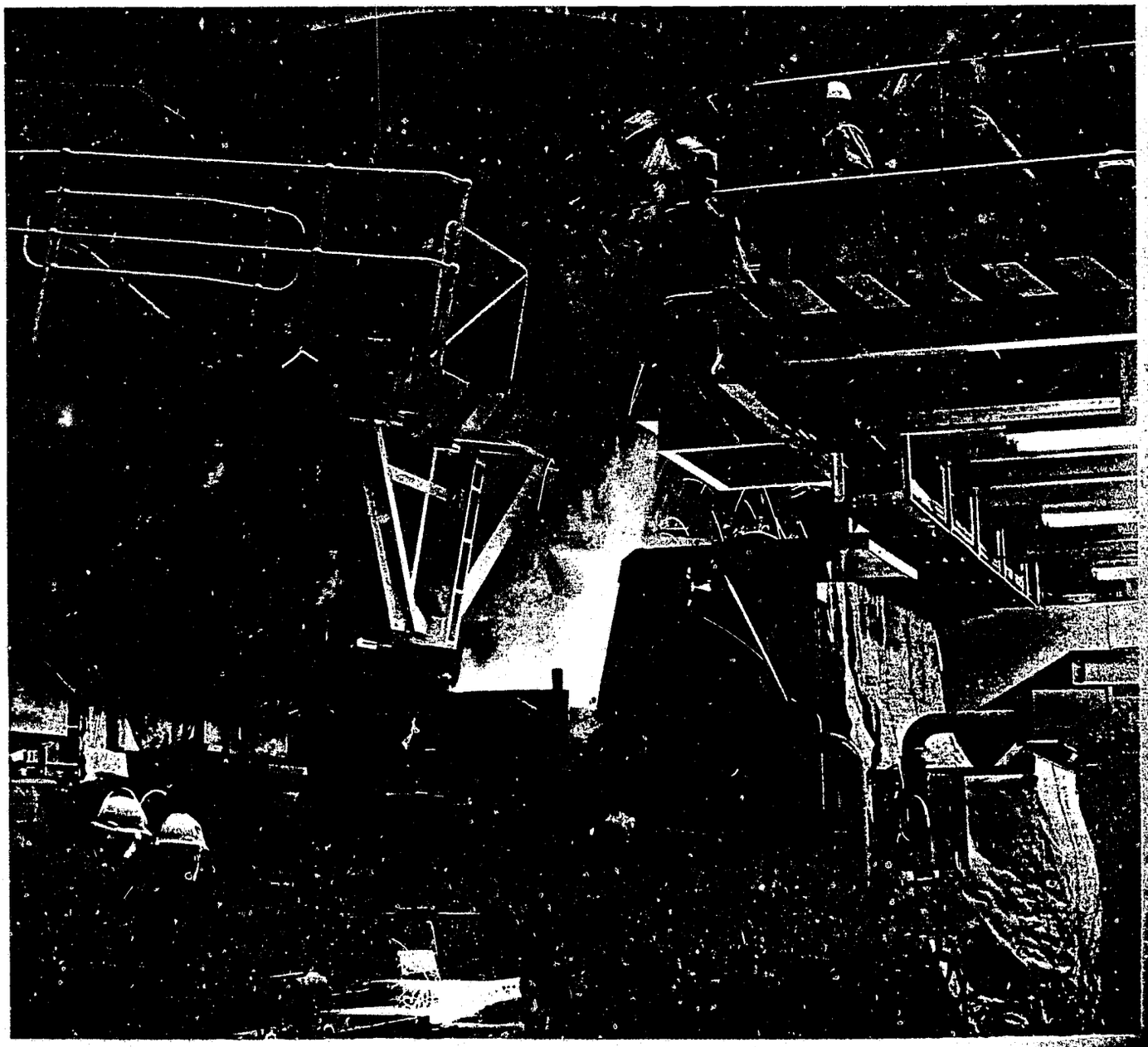
The exact duration of delayed capital expenditure will largely depend on when and how soon the domestic demand for steel will improve and to what extent the Corporation will succeed in fully and profitably utilizing its existing facilities. With the capacity created in recent years, Iscor is in a strong position to satisfy the domestic market, together with other local producers, for several years to come.

Since the Corporation is now not able to embark on any new major extensions, and since it takes years to commission plant, steel shortages which will inevitably have to be made up by imports at high cost, may again occur after recovery of the domestic market.

A positive aspect is that a large part of Iscor's overall present capacity was acquired during the past six years and that this equipment is therefore of the most modern in comparison with facilities elsewhere in the world. It includes coke ovens, blast furnaces, steel melting plants and particularly mills. In future, increased production, with improved qualities and finish, will be possible. (See annexure on page 20 for completed production units.)

Moreover, there is the potential for rounding off particularly at the Vanderbijlpark and Newcastle Works. In other words, by the addition mainly of metallurgical production facilities, the potential reserve capacity of the mills may be fully utilized. In this way, the present production capacity may be raised by about 50 per cent to approximately 8,5 million tons of finished steel, at a relatively low capital investment per additional ton of production capacity.

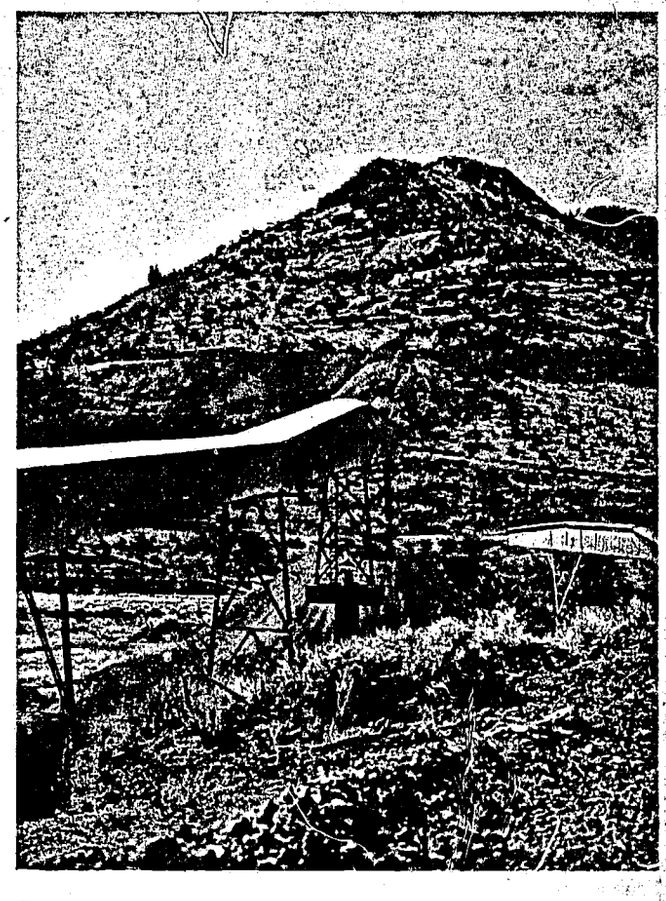
Molten steel flows from a ladle into the tundish of a continuous slab-casting machine at the Vanderbijlpark Works.



PROCESS IMPROVEMENT

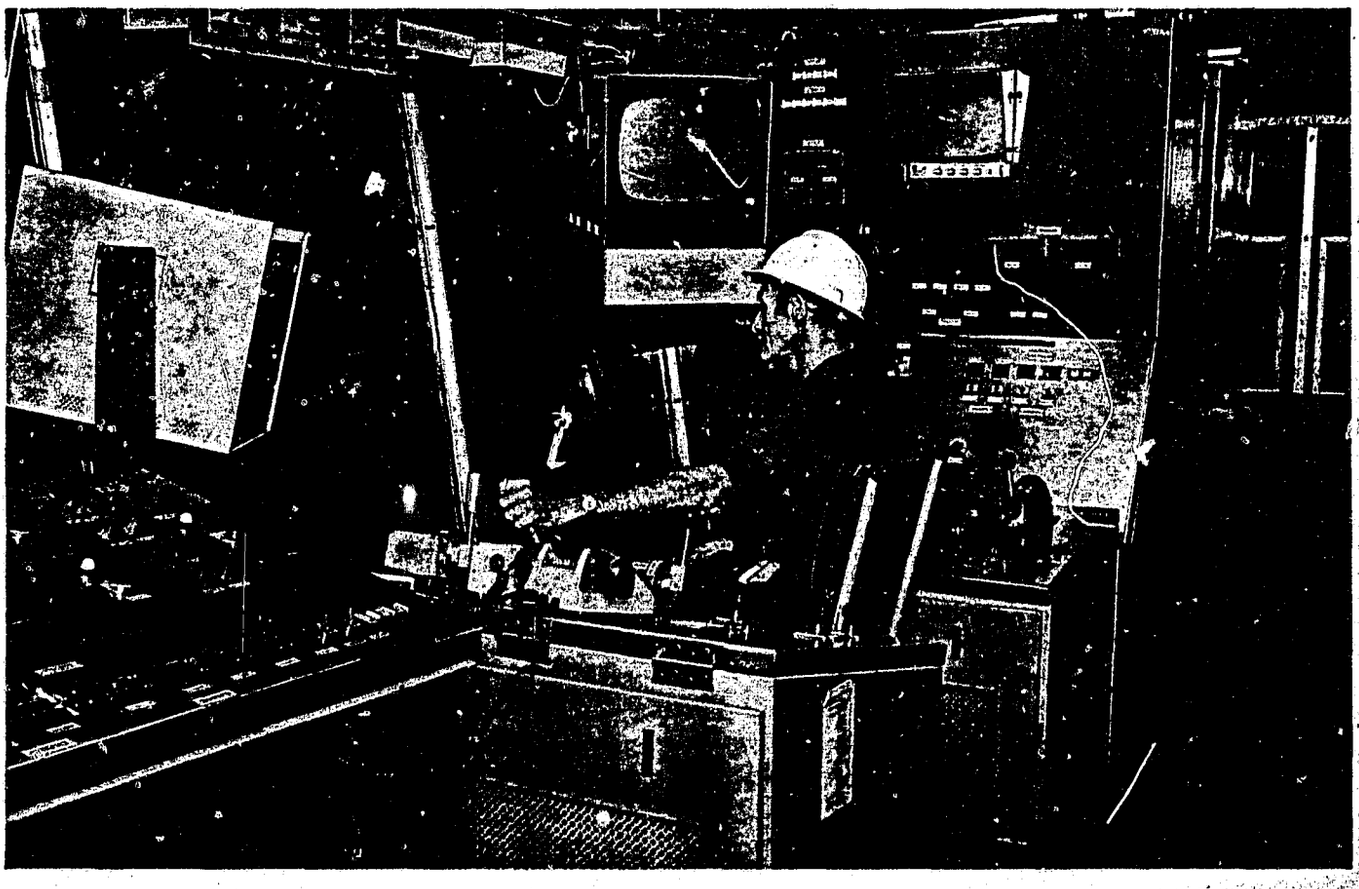
During the year, 150 000 tons of high-grade coal were imported from the USA. This was done, on the one hand, to make up for a temporary shortage of coking coal from local sources and, on the other hand, to gain experience of the imported coal and determine its possible industrial economic advantages. First indications are that blast furnace productivity can be increased by 7½ per cent with the admixing of about 15 per cent coke from imported coal. Trials are still under way, and the final evaluation still has to be done. If similar results can be obtained with high-grade South African coal, as is indeed anticipated, the imbalance between metallurgical and mill capacities will be largely eliminated without additional heavy capital expenditure.

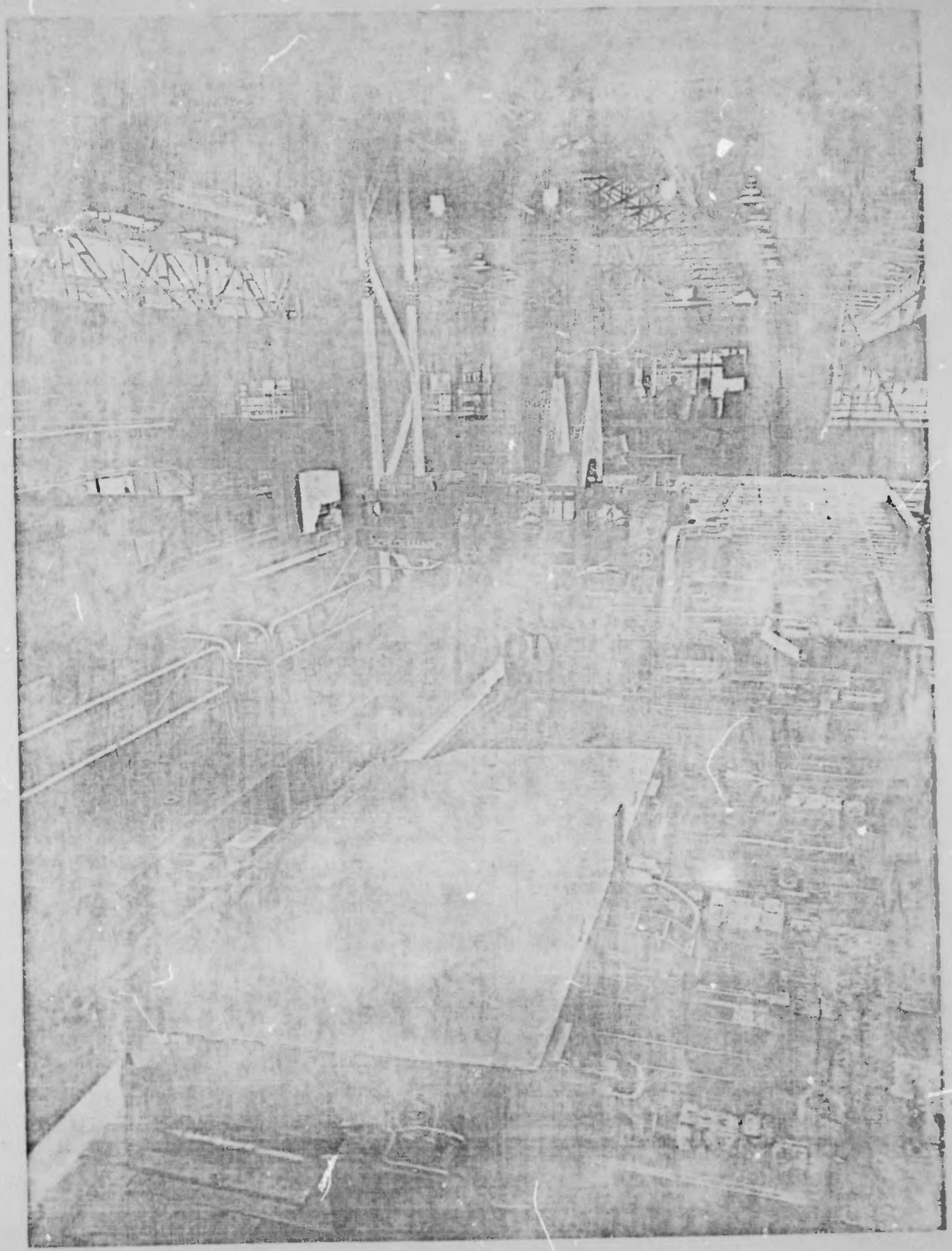
During the financial year it had been possible to improve the plants at the Pretoria coke ovens for the drying and preheating of coal, prior to coking, to such an extent that full-scale blast furnace trials could be conducted with the improved coke. This new technique is being tested on a world-wide scale and are still accompanied by considerable teething troubles. The first blast furnace results at the Pretoria Works are promising, but the final technical and industrial economic evaluation still has to be done.



Crushed iron ore from Donkerpoort, at the Thabazimbi mine, being stockpiled.

The control cabin for the roughing stand of the new heavy mill at the Pretoria Works.





The final stand of the new heavy mill at the Pretoria Works.

Production-scale trials are being conducted at the Newcastle Works with the briquetting of coal, prior to coking, in the existing cell furnaces. This is a technique-in-being, aimed at producing good coke with a percentage of poor coking coal. Iscor has been giving attention to the matter for several years now, and trials on pilot plant scale have shown that this technique, applied to South African coal, is capable of yielding an appreciably improved coke. However, the specific technology for large-scale use still has to be developed, and it is to this end that the trials at the Newcastle Works are being conducted.

In the new heavy mill of the Pretoria Works, the universal rolling of rails was conducted on a trial basis. It is a system used by Sacilor in France and Nippon Steel in Japan, and Iscor's trials are conducted under licence from these two undertakings. The idea is to determine the industrial economic potential of the system. The trial rolling has so far been promising, but certain refinements still have to be effected. An adequate evaluation should be possible during the next year.

MINING

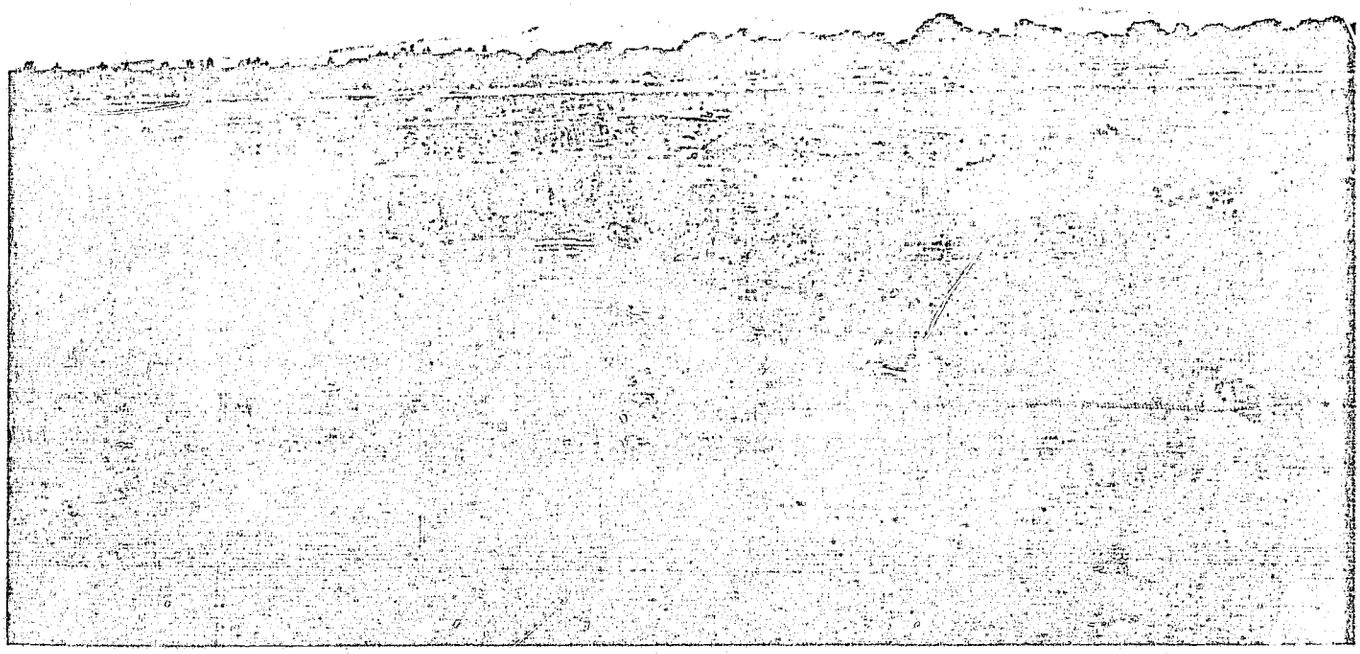
In the mining field, the financial year under review was characterized in particular by two important developments. First, the extensions at the Sishen iron ore mine have reached such a stage of increased production that Iscor's own ore requirements could be supplied and provision made for bulk exports. Secondly, a break-through was made with the discovery of three promising deposits of straight coking coal in the northern Transvaal. These finds mean that the Corporation's years-long concern over the quality of coke for its blast furnace operations may soon be something of the past. Several mining houses and other interested parties in the private sector were invited to submit suggestions regarding the exploitation of these deposits on behalf of Iscor.

Iron ore dispatches from Sishen amounted to 13,8 million tons and from the Thabazimbi mine to 2 million tons.

The Corporation's coal mine in Natal supplied 1,2 million tons of straight coking coal to the works. This represents 19,9 per cent of the Corporation's metallurgical coal requirements, whilst the remainder was purchased. Development work at this mine is proceeding.

At Grootegeluk, in the north-western Transvaal, where a mine is being developed for the supply of blend coking coal, considerable progress was made, although activities were intentionally delayed as a result of the Corporation's curtailment programme.

The newly developed second dolomite quarry at Glen Douglas.

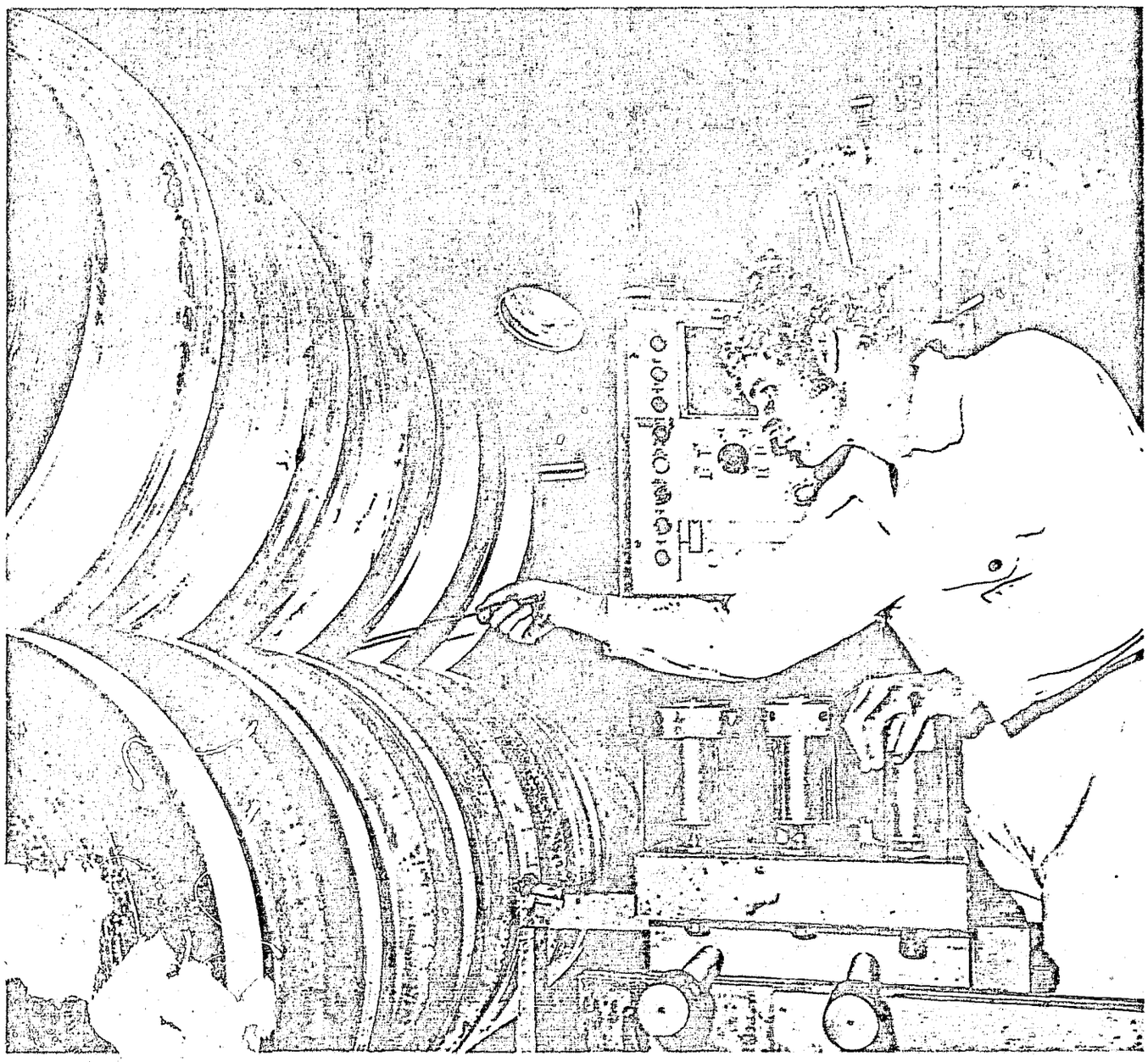


The Uis tin mine in South West Africa produced 1 247 tons of tin concentrate, with a tin metal content of 63,7 per cent. It met 40 per cent of the Corporation's needs, whilst the remainder was purchased.

During the year the Rosh Pinah zinc mine in South West Africa, in which Iscor has a controlling interest, dispatched 40 281 tons of zinc concentrate, with a zinc metal content of 48,4 per cent, for processing to the works of the Zinc Corporation of SA Limited (Zincor) near Springs. In addition, 11 876 tons of lead concentrate, with a lead content of 45 per cent, were produced and sold.

The extensions at the Glen Douglas dolomite quarry were completed during the year. This quarry, together with the Mooiplaas quarry, supplied 1,3 million tons of dolomite to the works.

A roll-turner plying his trade at the Newcastle Works.



PERSONNEL

The salary and wage expenditure amounted to R278,4 million, compared to R239,8 million in the previous year.

Despite an increased supply of labour, mainly as a result of the subdued economy, serious shortages continue to be experienced, particularly as far as skilled labour, such as artisans and operators, is concerned.

The utilization of female labour in traditional male posts, mainly at the Vanderbijlpark and Pretoria Works, is still proving successful. At present 930 women are employed in production worker posts previously classified as male posts.

This year Iscor has 275 university bursary holders, of whom 55 are new recipients. At the end of the financial year approximately 3 300 apprentices were employed at the various training centres of the Corporation. In total, Iscor trains about one out of every three of the 11 500 apprentices in the entire engineering industry in the country.

A female operator at the control panel of a pickling line at the Vanderbijlpark Works.

CONTROLLED AND ASSOCIATED COMPANIES

Some of the Corporation's subordinate activities, aimed at the promotion of its main objectives, are performed for practical reasons and for the sake of expedience through controlled and associated companies. These undertakings, which operate both in the Republic and in foreign countries, are involved in the provision of raw materials for production processes and render marketing, personnel and estate services.

It is significant, however, to note that the book value of Iscor's financial interests in companies which would normally fall under the private sector, amount to only about 3 per cent of its total assets. No additional interests in this field were obtained during the financial year.

DIRECTORATE AND MANAGEMENT

During the year, certain managerial changes were effected in order to promote rationalization, improve control and revitalize communication.

In the previous annual report, mention was made of the resignation of The Honourable J. F. W. Haak as a director. Prof. D. G. Franzsen was appointed in his place with effect from 27 October 1976. During the year under review the undersigned was reappointed chairman and director and Dr. M. D. Marais, Prof. H. J. Samuels and Mr. J. J. Vermooten were reappointed directors, all for a further term of three years. I would like to thank my co-directors for their valued contributions to the activities of the directorate.

I also wish to express my appreciation to the Managing Director, Mr. J. P. Coetzee, the General Manager, Mr. K. R. Rümelin, members of management and all other employees for their dedication under difficult circumstances.

At the forthcoming annual general meeting I will move that the annual financial statements, as submitted, be approved and adopted and that all things undertaken and performed on behalf of the Corporation, be confirmed.

T. F. Muller
Chairman

Pretoria
17 October 1977

Annexure

The following major projects were completed and commissioned at Iscor centres during the financial year:

- At the Pretoria Works, step 1 of heavy mill No. 2, including finishing facilities, with a capacity of 32 000 finished tons per month, at R64,5 million.

- At the Vanderbijlpark Works, two continuous slab-casting machines, with a joint capacity of 125 000 tons per month, at R52 million.

  A double edge cutter for the 32 mm shearing line, with a capacity of 45 000 tons a year, at R5,5 million.

  A fourth galvanizing line, with a capacity of 25 500 tons per month, at R17 million.

  A continuous painting and laminating plant, with a capacity of 9 000 finished tons per month, at R7 million.

  (A coke oven battery, with a capacity of 1 100 tons per day, at R11 million, was completed but, owing to the damping programme, was "moth-balled".)

- At the Newcastle Works, the last 100 of 200 coke ovens, with a capacity of 3 850 tons per day, at R44 million.

  A new blast furnace, with blower and gas-cleaning equipment, with a capacity of 3 200 tons per day, at R52,4 million.

  A sinter plant (with blending plant), with a capacity of 6 100 tons per day, at R33,5 million.

  A continuous slab-casting machine, with a capacity of 60 000 tons per month, at R23 million.

  A billet inspection plant, at R5 million.

- At the Sishen iron ore mine, six drilling machines, with a drill diameter of 250 mm, at R4,5 million.

  Six power shovels, four with a capacity of 15,3 m^3 and two of 11,5 m^3 each, at R12,7 million.

  Seventeen trucks, eleven with a capacity of 150 tons and six of 90 tons each, at R8,9 million.

  The second phase of the ore-handling plant, with a capacity of 9 million tons a year, at R24,5 million. (Total capacity of first and second phases: 18 million tons a year.)

  Workshops and fuel storage and distribution facilities, at R8,5 million.

SOUTH AFRICAN IRON AND STEEL INDUSTRIAL CORPORATION, LIMITED

Annual Financial Statements

for the year ended 30 June 1977

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Board approval

The annual financial statements which appear on pages 22 to 32 were approved by the Board of Directors on 28 September 1977 and are signed on its behalf by

T. F. Muller
J. P. Coetzee | Directors **A. C. Greyling** Group Secretary

Report of the auditors

To the shareholders of South African Iron and Steel Industrial Corporation, Limited (constituted and incorporated by Act of Parliament in the Republic of South Africa).

We have examined the annual financial statements of the Corporation set out on pages 22 to 32 for the year ended 30 June 1977.

In our opinion, based on our examination, they fairly present the financial position of the Corporation and the results of its operations for the year then ended.

Altmann and Brugman
Peat, Marwick, Mitchell & Co.
Chartered Accountants (S.A.)

Pretoria and Johannesburg
12 October 1977

Report of the Directors

The directors have pleasure in presenting their report on the results and activities of the Corporation for the year ended 30 June 1977.

Accounting policies

An in-depth study was made of the Corporation's accounting policies in the light of prevailing conditions and circumstances. Certain accounting policy changes were made, the detail of which is set out in the notes to the financial statements. The overall effect of all policy changes made, is to reduce the charge against income this financial year by R27 287 000.

The Corporation has persisted with its policy of charging production costs with the raisings to 'Reserve for increased replacement cost of fixed assets' and the amount charged for the current year amounted to R64 200 000. It should be noted that comparatively few manufacturing concerns provide for increased replacement cost of fixed assets and this fact must be taken into account when comparing Iscor's financial results with those of other companies.

Financial results

Net income from trading for the year under review has been drastically affected by the high rate of inflation and the consequent rises in production costs. Another major contributory factor was the fact that approximately 29% of the total tonnages of steel products sold consisted of exports which were sold at prices on average considerably lower than domestic prices. This was considered feasible on a marginal cost basis and the only alternative would have been to curtail production with consequent unemployment, increased production costs and loss of foreign exchange.

The trading and other income for the year amounted to R64 839 000 after charging an amount of R64 200 000 (1976 — R49 495 000) to production costs in respect of reserve for increased replacement cost of fixed assets. After charging the cost of financing of R103 928 000 (1976 — R87 657 000), the Corporation reflected a loss for the year of R49 089 000. Notwithstanding this loss, it should be noted that due mainly to the fact that the 'Reserve for increased replacement cost of fixed assets' is maintained, 'Distributable reserves' increased by R15 078 000 from R357 664 000 at 30 June 1976 to R372 742 000 at 30 June 1977. 'Shareholders' interest' reflected an increase during the year of R135 078 000 from R872 864 000 to R1 007 942 000 at 30 June 1977.

Sale of Sishen-Saldanha Scheme

In terms of a take-over agreement, the Sishen-Saldanha scheme was sold to the South African Railways with effect from 1 April 1977. The transaction involved the transfer of fixed assets amounting to R527 741 000 and other sundry current assets and liabilities.

The Corporation also operated the railway line and harbour activities on behalf of the South African Railways for the period 1 July 1976 to 31 March 1977 and financed operating expenditure up to 31 March 1977 to an amount of R12 516 000, which amount plus interest is repayable to the Corporation out of future income from the scheme.

An amount of R438 552 000 previously included in fixed period loans payable by the Corporation is also being transferred to the South African Railways in terms of the abovementioned take-over agreement. Although all the transactions in respect of the agreements for cession of these loans to the Railways Administration had not been finalized at 30 June 1977, the Administration had nevertheless legally accepted full responsibility for the servicing of these loans and they have been treated as if the cession had been completed at that date. No profit or loss arose on the sale of the scheme.

Capital employed

During the year a further 60 000 000 B shares of R2 each were issued at par to the State President which resulted in the total issued and fully paid capital increasing from R515 200 000 to R635 200 000.

The Corporation made further stock issues, entered into loan and revolving credit agreements and utilized suppliers credit and after taking redemption payments on loans into account, the net inflow of funds amounted to R323 328 000. During the year loans amounting to R438 552 000 were transferred to the South African Railways Administration in terms of the take-over agreement in respect of the Sishen-Saldanha scheme. The above transactions resulted in fixed period loans decreasing by R115 224 000 to R1 753 482 000 at 30 June 1977 (1976 — R1 868 706 000).

Fixed assets

The additional investment in fixed assets during this financial year amounted to R294 839 000 (1976 — R637 910 000).

At 1 April 1977 assets amounting to R527 741 000 were sold to the South African Railways Administration in terms of the take-over agreement in respect of the Sishen-Saldanha scheme, of which R454 858 000 was reflected under 'Extensions under construction' as at 30 June 1976.

The net book value of fixed assets at the year-end amounted to R1 892 020 000 (1976 — R2 208 937 000), which includes extensions under construction of R294 477 000 (1976 — R905 049 000), the major portion of which was in respect of development of the export mine at Sishen and the Grootegeluk coal mine in the Northern Transvaal.

Interests in controlled and associated companies

The net increase of R2 135 000 in loans and advances is mainly attributable to further advances of approximately R6 million to the Corporation's mining companies to assist them to finance their capital extensions and advances of approximately R3 million to Iscor Berlin (Proprietary) Limited, a new warehousing and distribution company operating in the East London area.

[illegible] offset by a reduction in loans [illegible] and establishments amounting to approximately R7 million.

Current assets and liabilities

The value of 'Stocks and work-in-progress' increased by R179 242 000 from R395 289 000 at 30 June 1976 to R574 531 000 at 30 June 1977.

With the coming into operation of new production units during the year, coinciding with the economic recession being experienced in South Africa, it was necessary to channel a substantial portion of production into the export market and to build up stocks. This increased volume of stock on hand at 30 June 1977 and the higher production costs, account for the increase in value of process stocks of approximately R110 million.

The value of plant spares, stores and raw material stocks increased by approximately R69 million during the year. This can be attributed to the additional plant spares purchased to provide for the requirements of new plants being built and the considerable escalation in the purchase prices of all stocks.

The increase of R61 666 000 in 'Debtors' in comparison with the previous year is mainly due to extended payment conditions pertaining to exports and increases in selling prices of products in the local market.

'Creditors' at 30 June 1977 reflects a decrease of R13 647 000 as compared with the previous year, which is in keeping with the reduction of expenditure on capital extensions.

Directorate

The names of the directors in office at 30 June 1977 and at the date of this report are set out on page 1.

At a meeting of private shareholders held on 24 November 1976, Prof. H. J. Samuels was reappointed as a director of the Corporation.

Dr. M. D. Marais and Mr. J. J. Vermooten were both reappointed directors by the State President for further periods of three years with effect from 28 November 1976 and 25 May 1977, respectively.

At an extraordinary meeting of private shareholders held on 27 October 1976, Prof. D. G. Franzsen was appointed as a director of the Corporation in place of the Hon. J. F. W. Haak, who resigned as director as from 10 September 1976.

On 1 March 1977, Dr. T. F. Muller was reappointed Chairman and director of the Corporation by the State President for a further period of three years.

Income Statement

for the year ended 30 June 1977

	Notes	1977 R000	1976 R000
Turnover		1 003 239	799 005
Net income from trading	2	44 707	51 342
Dividends received	3	10 132	7 768
Profit on sale of investments		—	117
		54 839	59 227
Provision for writing down an investment		—	(1 827)
Financing charges	4	(103 928)	(87 657)
Net loss for year		(49 089)	(30 057)
Accumulated loss brought forward from previous year		(101 936)	(71 846)
Net loss for year		(49 089)	(30 057)
Transfer from General Reserve		194 000	—
		42 975	(101 903)
Dividend on 7½% cumulative preference shares		(33)	(33)
Accumulated surplus/(loss) at end of year		42 942	(101 936)

Balance Sheet

at 30 June 1977

	Notes	1977 R000	1977 R000	1976 R000	1976 R000
Source of capital employed					
Share capital	5		635 200		515 200
Distributable reserves	6		372 742		357 664
Shareholders' interest			1 007 942		872 864
Fixed period loans	7		1 753 482		1 868 706
			2 761 424		2 741 570
Employment of capital					
Fixed assets	8		1 892 020		2 209 937
Interests in controlled and associated companies	9		272 160		270 025
Sishen-Saldanha scheme	10		98 743		—
Loan portion of taxation			854		1 014
Current assets					
Stocks and work-in-progress	11	574 531		395 289	
Debtors		198 801		137 135	
Import/export schemes	12	2 811		(938)	
			776 143		532 086
			3 039 920		3 012 062
Current liabilities					
Creditors		218 246		231 893	
Bankers and short-term loans	13	19 397		5 563	
Shareholders for dividends		16		16	
		237 659		237 472	
Provisions					
Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses, self-insurance and sundry contingencies		40 837		33 020	
			278 496		270 492
			2 761 424		2 741 570

1. Accounting policies

This summary of the principal accounting policies of the Corporation is presented to assist in the evaluation and appreciation of the annual financial statements in which these policies have in all material respects been followed on a basis consistent with the previous year, except where specified.

1.1 Constitution

The Corporation is constituted in terms of the Iron and Steel Industry Act, 1928 (as amended). This act stipulates that the Companies Act, 1973, or any amendment thereof, does not apply to the Corporation.

1.2 Turnover

Turnover represents the invoiced sales value (excluding any import or export levies) of all products sold on the local and export markets.

1.3 Depreciation

Depreciation of fixed assets used in production is calculated on a straight line basis at a rate determined by the expected useful life of each individual type of asset. No depreciation is provided on properties, leases and rights.

Basic changes in policy were made during the year as follows:—

Whereas previously depreciation continued to be charged in the case of an asset which continued in use after completion of its anticipated life, the raising of depreciation on fixed assets now ceases once a particular asset is fully depreciated.

Where an asset is retired, the adjustment required to write off the redundant or obsolete asset is made against income. The proceeds of any sales are credited to income. Previously any such adjustments were made against the depreciation provision.

In addition to these policy changes, the expected useful lives of major units of plant were reviewed and changed where considered necessary.

Based on the revised policy and depreciation rates, recalculations were made retrospectively, resulting in the depreciation provision reflecting an excess of R69 744 000 at 30 June 1976. This excess has been retained in the provision account and partly utilized for writing off the asset head 'Site preparation' (see note 1.8). The above changes had the effect of reducing the depreciation charge by R9 845 000 for the current financial year (see note 2).

1.4 Increased replacement cost of fixed assets

In addition to the depreciation, a charge based on the current wholesale price index is made to production costs to provide for the estimated increased replacement cost of fixed assets arising in a particular year.

The revision of the expected useful lives of major units of plant as set out in note 1.3 above, has had the effect of reducing this year's charge by R5 709 000 (see note 2).

1.5 Provisions

Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses and self-insurance are provided for by charges to production costs. When expenditure in respect thereof is incurred, such expenditure is charged against these provisions.

1.6 Expenditure on Mining Development

In accordance with the accounting practice generally adopted by the mining industry in South Africa, the following policies have been applied in connection with expenditure on new mining development. In respect of the Sishen North and Grootegeluk mines pre-production financing charges have been capitalized with effect from 1 July 1974 (see notes 1.7 and 4). Pre-production expenditure on waste stripping and direct administrative project costs have also been capitalized. The above items of expenditure will be written off over the life of the mine or 20 years, whichever is the lesser period.

Prospecting expenditure of R1 937 000 incurred during the year under review, relating to the new coal fields discovered in the Soutpansberg area, has been capitalized. This amount is included under 'Properties, leases and rights'. Previously all prospecting expenditure was written off when incurred.

1.7 Financing charges

'Financing charges' represents the net cost of financing which consists mainly of interest paid on fixed period loans, reduced by interest received as well as financing charges on new mining development (see note 1.6).

The interest rate used to calculate the financing charges capitalized in respect of the pre-production expenditure on new mining development is based on the Corporation's average borrowing rate for the year under review.

'Financing charges' includes the cost of acquiring loans, differences resulting from foreign currency conversions, costs and commissions arising from forward exchange purchase contracts, discounts on the issue price of bonds and other expenses incurred on receipt or renewal of loans and is charged when incurred.

1.8 Site preparation

As from 1 July 1973 expenditure in respect of site preparation for extensions has been capitalized and shown under a separate asset head — 'Site preparation'. After capitalizing R3 554 000 during the current year (1976 — R3 897 000) the total 'Site preparation' amounted to R39 822 000 at 30 June 1977. This amount has been written off against the excess depreciation provision (see notes 1.3 and 8).

1.9 Steel used on capital extensions

No adjustment is made for profit arising on steel manufactured by the Corporation, sold at arm's length to the trade and subsequently used by contractors on the Corporation's capital extensions.

1.10 Foreign currency conversions

Loans and suppliers credit repayable in foreign currencies and secured by forward exchange purchase contracts are converted into South African currency at the fixed rates of exchange applicable to the respective forward exchange purchase contracts.

Loans and suppliers credit repayable in foreign currencies and not secured by forward exchange purchase contracts are converted into South African currency at rates of exchange ruling at balance sheet date.

Current assets and current liabilities in foreign currencies are converted into South African currency at rates of exchange ruling at balance sheet date.

1.11 Stocks and work-in-progress

Finished products and work-in-progress are valued at current standard costs including labour, materials, manufacturing and direct overhead costs.

Raw materials and consumable stores are valued at current standards. These standards are reviewed at each year-end and on commodities for which purchases have taken place during the year, the standards are changed to the purchase prices applicable at the date of such purchases.

Plant spares are valued at current standards less provision for obsolescence and depreciation. These standards are reviewed at each year-end and on commodities for which purchases have taken place during the year, the standards are changed to the purchase prices applicable at the date of such purchases.

Rates used for the calculation of the provision for obsolescence and depreciation on plant spares have been reviewed and changed, resulting in a decreased charge of R11 733 000 for the current year (see note 2).

Rolls and moulds are valued at cost less a charge for usage and a provision for obsolescence.

Appropriate provision has been made where stock values are considered to exceed net realizable values and the aggregate book value is below cost.

	1977 R000	1976 R000
2. Net income from trading before adjusting for the following abnormal items —	17 420	51 342
Reduction in depreciation on fixed assets (see note 1.3)	9 845	—
Reduction in charge for increased replacement cost of fixed assets (see note 1.4)	5 709	—
Reduction in charge for obsolescence and depreciation of plant spares (see note 1.11)	11 733	—
Net income from trading as per income statement	44 707	51 342

	1977 R000	1976 R000
Net income from trading	44 707	51 342
— after providing for		
Depreciation of fixed assets	83 662	67 105
Depreciation under-raised on fixed assets retired	353	—
Increased replacement cost of fixed assets	64 200	49 495
Furnace reconditioning and renewal of short-life assets	16 095	13 490
Extraordinary operating expenses	4 079	5 047
Self-insurance	2 427	2 602

3. Dividends received

Listed shares	2 298	1 975
Unlisted shares	7 834	5 793
	10 132	7 768

4. Financing charges

Net financing charges	103 928	87 657
— after deduction of		
Interest received from controlled and associated companies	11 397	9 805
Other interest received	5 565	3 431
Financing charges recovered — Sishen-Saldanha scheme	36 929	33 105
Financing charges capitalized — new mines (see note 1.6)	13 507	12 773
	67 398	59 114

5. Share capital

Prescribed by Iron and Steel Industry Act, 1928 (as amended)		
500 000 A shares of R2 each	1 000	1 000
500 000 000 B or preference shares of R2 each	1 000 000	1 000 000
	1 001 000	1 001 000
Authorized, issued and fully paid		
500 000 A shares of R2 each	1 000	1 000
316 880 364 B shares of R2 each	633 761	513 761
219 636 7½% cumulative preference shares of R2 each	439	439
	635 200	515 200

The unissued B or preference shares may be issued by the Board at not less than par and under such conditions as the State President may approve, provided that present holders of B shares shall have the first right to subscribe for such additional shares.

6. Distributable reserves

General reserve		
Balance at beginning of year	194 000	194 000
Transferred to income statement	194 000	—
Balance at end of year	—	194 000
Reserve for increased replacement cost of fixed assets		
Balance at beginning of year	265 600	216 105
Charged to production costs (see note 1.4)	64 200	49 495
Balance at end of year	329 800	265 600
Accumulated surplus/(loss) per income statement	42 942	(101 936)
Net distributable reserves	372 742	357 664

	1977 R000	1976 R000
7. Fixed period loans	**1 753 482**	**1 868 706**

(i) The amount reflected as fixed period loans at 30 June 1977 has been arrived at after deducting an amount of R438 552 000, being the loans transferred to the South African Railways Administration in terms of the take-over agreement in respect of the Sishen-Saldanha scheme. Although the finalization of the transactions regarding cessions and agreements has not been completed, the Administration has accepted full responsibility for the servicing of these loans.

(ii) Loans repayable in foreign currencies which are not secured by forward exchange purchase contracts amount to R92 598 000 (1976 — R92 042 000). Of this amount R59 616 000 (1976 — R53 475 000) is payable in United States dollars and R32 982 000 (1976 — R38 567 000) in British Sterling.

8. Fixed assets

Properties, leases and rights	51 522	37 732
Buildings and works	622 255	552 625
Machinery, plant and furnaces	1 359 332	1 094 332
Site preparation	—	36 268
Pre-production expenditure — new mining development	24 190	121
Total cost	2 057 299	1 721 078
Depreciation	459 756	417 190
	1 597 543	1 303 888
Extensions under construction — at cost	294 477	905 049
Net book value	1 892 020	2 208 937
Depreciation at beginning of year	417 190	356 619
Charged to production costs	84 015	67 105
	501 205	423 724
Accumulated depreciation on retired assets written off	1 627	—
Redundant or obsolete assets written off	—	6 534
Site preparation written off	39 822	—
Depreciation at end of year	459 756	417 190

(i) Fixed assets amounting to R10 032 000 (1976 — R8 227 000) have been erected on property of companies wholly-owned by the Corporation.

(ii) An amount of R4 616 000 (1976 — R3 968 000) included under 'Buildings and works' is in respect of the costs of a hostel and houses for Bantu employees of the Corporation.
The hostel buildings and houses were erected on leasehold property in the South African Bantu Trust area in terms of the leasehold agreement.

(iii) 'Extensions under construction' at 30 June 1976 included expenditure of R454 858 000 on the Sishen-Saldanha scheme. This amount is included in the assets of R524 779 000 taken over by South African Railways Administration (see note 10).

	1977 R000	1976 R000
9. Interests in controlled and associated companies		
Listed shares — at cost (market value 30 June 1977 — R18 450 000; 1976 — R23 069 000)	24 389	24 890
Unlisted shares — at cost less provision for writing down an investment	53 573	53 391
Loans and advances		
Due to Corporation	202 603	199 006
Due by Corporation	(8 405)	(7 262)
	272 160	270 025
Comprises interests in —		
Companies whose operations form part of the main functions of the Corporation	250 048	247 908
Companies with investments in the iron, steel, engineering and allied fields	22 112	22 117
	272 160	270 025
10. Sishen-Saldanha scheme		
Amount due by South African Railways Administration in respect of take-over agreement		
Net assets	524 779	—
Loans transferred (see note 7 (i))	438 552	—
	86 227	—
Portion of the operating expenditure of the scheme for period 1 July 1976 to 31 March 1977 financed by the Corporation	12 516	—
	98 743	—
In terms of the take-over agreement R86 227 000 plus interest is repayable before 30 June 1978 and R12 516 000 plus interest is repayable out of future income from the scheme.		
11. Stocks and work-in-progress less provisions — in the aggregate below cost		
Finished products	92 120	44 553
Work-in-progress	154 255	91 874
Raw materials	35 164	32 585
Plant spares	148 181	93 310
Consumable stores	88 582	80 182
Rolls and moulds	56 229	52 785
	574 531	395 289
12. Import/export schemes		
Tinplate scheme	7 634	5 845
Steel import scheme	(2 987)	(4 796)
Iron and steel export scheme	(1 836)	(1 387)
	2 811	(338)
The above schemes are administered by the Corporation on behalf of the Department of Industries.		
13. Bankers and short-term loans		
Net amounts due to financial institutions	19 397	5 563

	1977 R000	19 R000
14. Taxation		
No provision has been made for current normal taxation as the Corporation has no taxable income for the year under review.		
Taxation deferred by reason of accelerated allowances on fixed assets has not been provided for as the Corporation has an accumulated assessed loss for tax purposes and is currently incurring losses.		
15. Contingent liabilities		
The Corporation has —		
(i) guaranteed the principal sum and interest on loans to its housing and estate companies	**31 400**	35 150
(ii) guaranteed a loan of US $3 500 000 from a bank in the United States to Iskop (Proprietary) Limited, a company in which the Corporation has a 50% interest. The amount drawn at 30 June 1977	**3 051**	3 051
(iii) discounted bills receivable	**14 657**	—
It is not anticipated that the Corporation will be called upon to fulfil any of the above obligations.		
16. Capital commitments		
(i) Contracts entered into for		
— Extensions	**86 420**	186 000
— Sishen-Saldanha scheme	**—**	86 000
(ii) Authorized expenditure for which there are no negotiated contracts		
— Extensions	**67 942**	109 000
— Sishen-Saldanha scheme	**—**	41 000
Capital expenditure will be financed from share issues, loans and funds generated by the Corporation from normal operations.		
17. Comparative figures		
Certain figures relating to 1976 have been restated in order to reflect appropriate comparisons with those of 1977.		

Statement of Source and Application of Funds

for the year ended 30 June 1977

	R000
Source of funds	
Net loss for year	(49 089)
Depreciation	84 015
Increased replacement cost of fixed assets	64 200
Funds from normal operations	99 126
Increase in share capital	120 000
Fixed period loans	323 328
Fixed assets sold to South African Railways	527 741
	1 070 195
Application of funds	
Loans transferred to South African Railways — Sishen-Saldanha scheme	438 552
[illegible] of fixed assets	294 839
[illegible]terests in controlled and associated companies	2 135
[illegible]frican Railways — Sishen-Saldanha scheme	98 743
7½% cumulative preference shares	33
[illegible] working capital	235 893
	1 070 195

Description	1977	1976	
Raw materials consumed (tons):			
Iron ore (including fine ore for sintering)	7 664 800	6 704 700	
Coking coal	6 158 800	5 112 400	
Other coal	429 600	443 200	
Dolomite (raw)	1 280 000	1 114 000	
Production (tons):			
Ingot steel	4 487 000	4 678 900	
Continuously cast blooms/slabs	1 167 800	497 200	
Sales (tons):			
Prime steel products*	3 788 200	3 587 700	
Pig iron	245 100	313 200	
Coke oven by-products	234 100	223 300	
Operating results:	R	R	R
Net sales value	917 554 000	766 456 000	601
(Loss)/net profit before tax	(49 089 000)	(30 057 000)	(35
Taxation:	—	—	—
Financial:			
Source of capital employed:			
Share capital	635 200 000	515 200 000	
Distributable reserves	372 742 000	357 664 000	
Fixed-period loans	1 753 482 000	1 868 706 000	
Current liabilities and provisions	278 496 000	270 491 000	
	3 039 920 000	3 012 062 000	2 232
Employment of capital:			
Fixed assets			
in operation — at cost less depreciation	1 597 543 000	1 303 888 000	1
under construction — at cost	294 477 000	905 049 000	
Investments	273 014 000	271 039 000	
Current assets	874 886 000	532 086 000	
	3 039 920 000	3 012 062 000	2 232

*Excluding off-cuts and scrap.

1975	1974	1973	1972	1971	1970	1969	1968
8 700	5 968 200	5 593 000	5 668 800	4 905 800	4 073 300	4 231 100	4 086 400
4 100	3 980 700	3 840 800	3 806 800	3 644 400	3 173 800	3 162 100	3 141 900
0 900	478 000	471 000	424 600	444 600	433 700	407 900	460 900
1 600	1 036 [illegible]00	1 002 200	1 006 700	886 300	631 700	584 800	636 200
9 700	4 036 500	4 052 700	3 816 300	3 478 400	3 384 900	3 350 400	3 194 600
6 200	20 200	—	—	—	—	—	—
6 300	3 135 500	2 968 200	2 659 000	2 638 200	2 676 400	2 483 600	2 249 100
3 300	684 700	827 700	846 900	650 200	100	144 200	152 700
3 700	140 800	145 100	144 500	154 500	158 500	147 300	151 500
R	R	R	R	R	R	R	R
0 000	444 840 000	372 819 000	304 067 000	291 470 000	238 480 000	219 862 000	199 382 000
000)	(37 603 000)	3 954 000	9 538 000	19 520 000	15 040 000	19 074 000	16 218 000
—	—	—	619 000	4 946 000	5 781 000	9 933 000	6 854 000
000	195 200 000	165 200 000	145 200 000	125 200 000	95 200 000	85 200 000	85 200 000
000	339 885 000	355 987 000	341 252 000	330 644 000	316 130 000	305 276 000	296 573 000
000	814 824 000	439 693 000	175 134 000	138 583 000	65 615 000	32 839 000	18 000 000
000	220 324 000	108 905 000	100 793 000	72 827 000	85 693 000	53 402 000	50 336 000
000	1 570 233 000	1 069 785 000	762 379 000	667 254 000	562 638 000	476 717 000	450 109 000
000	737 609 000	363 075 000	332 662 000	308 799 000	288 060 000	231 862 000	235 791 000
000	381 001 000	311 577 000	87 214 000	37 140 000	28 970 000	31 630 000	12 478 000
000	179 169 000	149 623 000	142 172 000	131 774 000	127 126 000	79 553 000	64 733 000
000	272 454 000	245 510 000	100 331 000	189 541 000	118 482 000	133 672 000	137 107 000
000	1 570 233 000	1 069 785 000	762 379 000	667 254 000	562 638 000	476 717 000	450 109 000

ISCOR ANNUAL REPORT 1975

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South African Iron and Steel Industrial Corporation, Limited

(Constituted and incorporated by Act of Parliament in the Republic of South Africa)

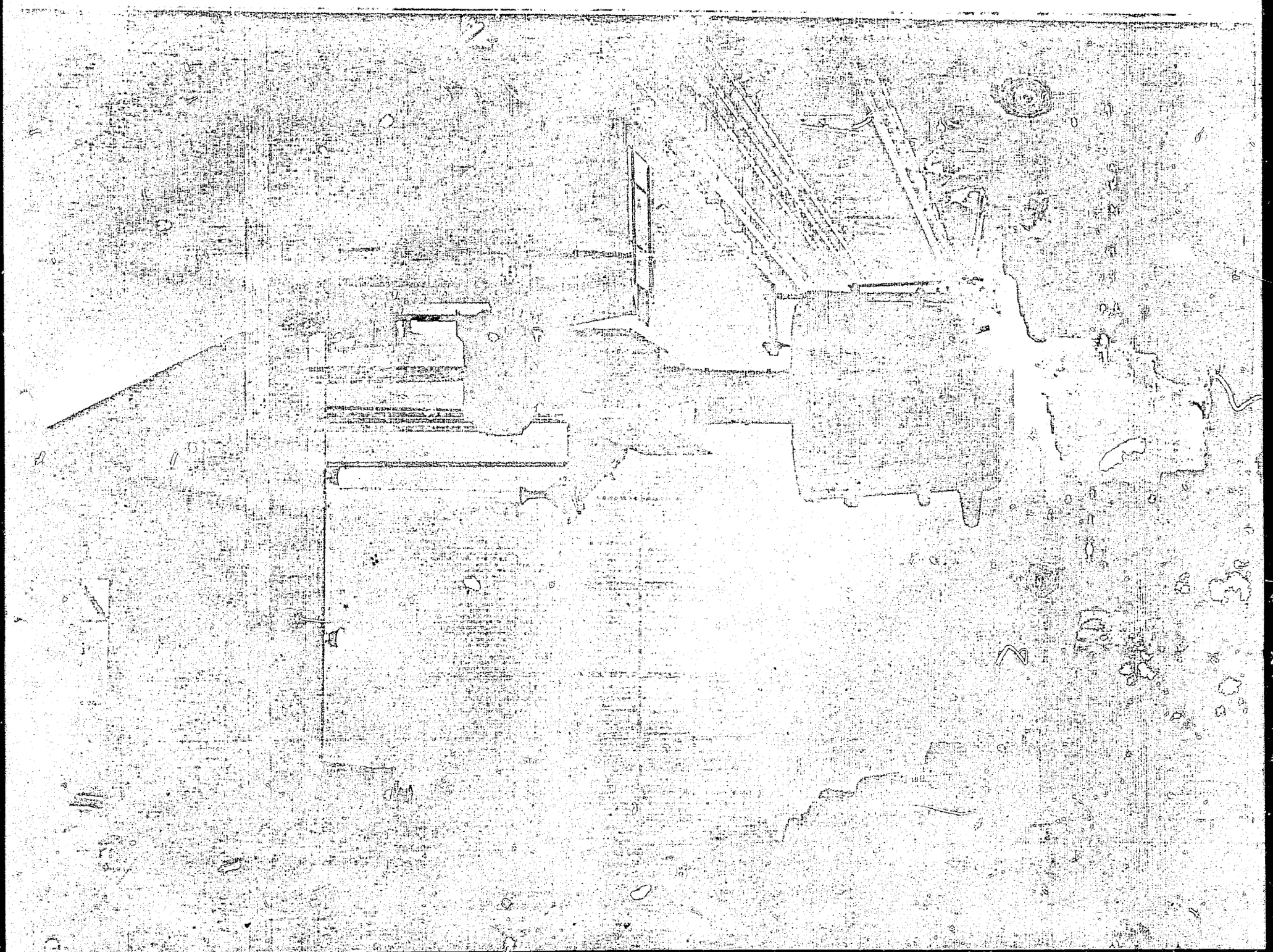
Board of Directors

Dr. T.F. Muller, Chairman
Mr. J.P. Coetzee (Managing)
The Hon. J.F.W. Haak
Mr. P.K. Hoogendyk
Dr. J.P. Kearney
Mr. J.J. Kitshoff
Dr. M.D. Marais
Prof. H.J. Samuels
Mr. J.J. Vermooten

Management

Mr. J.P. Coetzee, Managing Director
Mr. K.R. Rümelin, General Manager
Mr. L. Duncker, Divisional General Manager (Mining and Supplies)
Mr. H.C.H. Hutten, Divisional General Manager (Iscor Outside Interests – Technical)
Mr. P.A. Olivier, Divisional General Manager (Domestic Marketing)
Mr. P.J.C. Pretorius, Divisional General Manager (International Marketing)
Mr. L. van Zyl, Divisional General Manager (Finance and Business Services)
Mr. P.N. Basson, Deputy Divisional General Manager (Production)
Mr. J.P. de Vos, Deputy Divisional General Manager (New Development)
Mr. G.J. Botha, General Project Manager, Sishen-Saldanha Project
Mr. L.C.J. de Villiers, Corporate Manager (Personnel)
Mr. H.C. Jerling, Public Relations Manager
Mr. F.P. Kotzee, General Works Manager, Pretoria Works
Mr. D.W. Lamont, General Works Manager, Vanderbijlpark Works
Dr F.E. Malherbe, Research and Process Development Manager
Mr. S.F. Marais, Marketing Manager
Mr. I.J. Murray, Industrial Engineering Manager
Adv. J.J.M. Naudé, Group Secretary and Law Adviser
Mr. K. Prince, General Works Manager, Newcastle Works
Mr. P.J. Roux, Manager, International Marketing (Raw Materials)
Mr. W. van Wyk, Planning Manager
Mr. C.G. Wilson, Materials Manager

(Hierdie verslag is ook in Afrikaans beskikbaar)



Notices of Meetings

Annual General Meeting of Private Shareholders

Notice is hereby given that the annual general meeting of private shareholders (holders of B shares or preference shares) of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, on Wednesday, 26 November 1975, at 09h00 to nominate an auditor in accordance with Section 14(1) of Act No. 11 of 1928, as amended.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

By order of the Board
J. J. M. Naudé
Group Secretary

Iscor Headquarters
P.O. Box 450
Pretoria 0001
4 November 1975

Forty-Sixth Annual General Meeting

Notice is hereby given that immediately after the annual general meeting of private shareholders convened for 09h00 on Wednesday, 26 November 1975, the annual general meeting of shareholders of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, for the following business:

1. To receive the balance sheet and report of the directors for the year ended 30 June 1975.
2. To transact such other business as may be transacted at an annual general meeting of shareholders of the Corporation.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

By order of the Board
J. J. M. Naudé
Group Secretary

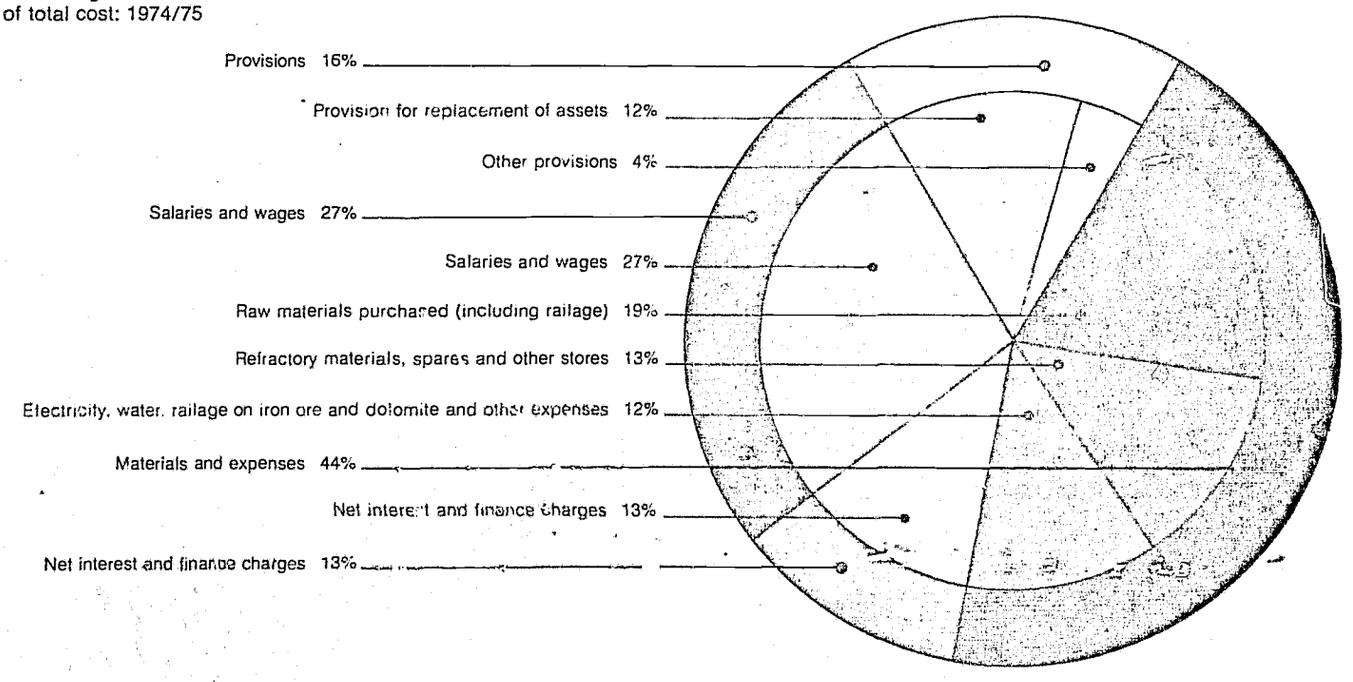
Iscor Headquarters
P.O. Box 450
Pretoria 0001
4 November 1975

Molten steel being teemed into ingot moulds at the LD furnace plant, Vanderbijlpark Works.

At a glance

(Figures rounded off to nearest thousand)	1975	1974
Total assets	R2 238 387 000	R1 570 233 000
Net loss	R35 874 000	R37 603 000
Sales (net value)	R601 860 000	R444 840 000
Iron ore dispatched from mines	6 460 000 tons	6 036 000 tons
Steel production: Ingots	4 350 000 tons	4 037 000 tons
Continuously cast blooms	306 000 tons	20 000 tons
Salary and wage costs	R192 500 000	R145 200 000
Planned expansion	1977/78: 7 million tons of liquid steel per annum.	
	1976: Sishen-Saldanha Bay railway line ready for ore traffic.	

Percentage distribution of total cost: 1974/75


Provisions 16%
Provision for replacement of assets 12%
Other provisions 4%
Salaries and wages 27%
Salaries and wages 27%
Raw materials purchased (including railage) 19%
Refractory materials, spares and other stores 13%
Electricity, water, railage on iron ore and dolomite and other expenses 12%
Materials and expenses 44%
Net interest and finance charges 13%
Net interest and finance charges 13%

Statement by the Chairman

To the Shareholders

The financial results for the year ended 30 June 1975 showed a small improvement compared with the previous year. Owing to increased sales tonnages and the benefit of increased selling prices of products, the net sales revenue increased by approximately 35 per cent. On the other hand, the Corporation again had to face the continuing spiral of increasing production costs.

To make provision, as has been the policy of the Corporation for the past 24 years, for the increased replacement cost of fixed assets, an amount of R34 281 000 (1974 – R21 626 000) was charged to cost of production. In addition, finance charges increased substantially by approximately R35 million to R87 865 000.

The net result was that the trading profit increased from R12 885 000 in 1974 to R49 239 000 for the year under review, and the overall net loss for the year amounted to R35 874 000 (1974 – loss R37 603 000).

However, owing to the above-mentioned provision of R34 281 000 for the increased replacement cost of fixed assets, the Corporation's "Distributable reserves" decreased by only R1,6 million.

Financing

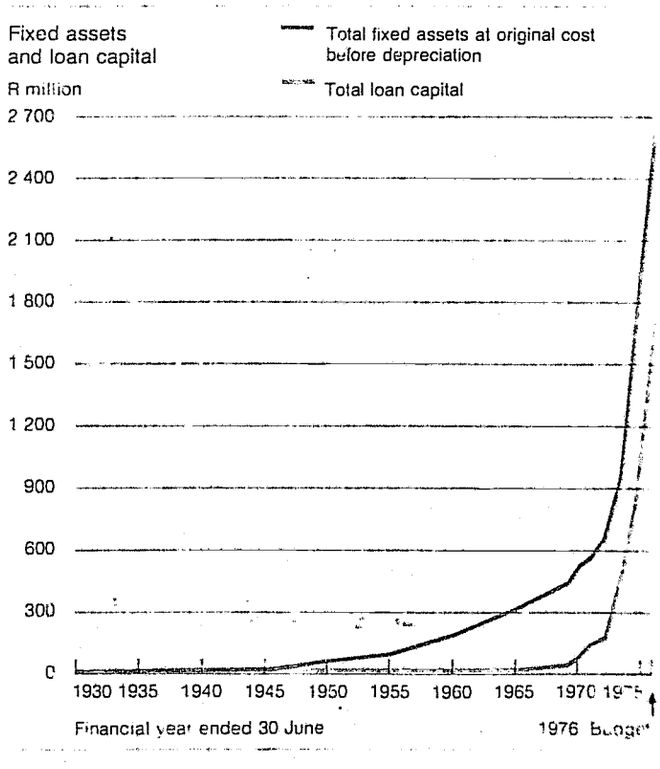
The "Statement of source and application of funds" for the financial year ended 30 June 1975, shows that during the year Iscor employed funds to the amount of R738 million for the acquisition of fixed assets, increases in other assets and for financing charges. In addition, a further R92 million was spent on the amortization of foreign loans which became due and repayable during the year, as well as on instalment repayments on other period loans. The total amount of financing therefore came to R830 million. This amount was financed from internal cash flow – i.e. profit before cost of financing, depreciation and other provisions – to a total of R137 million, an increase in issued share capital of R130 million and loan capital of R563 million.

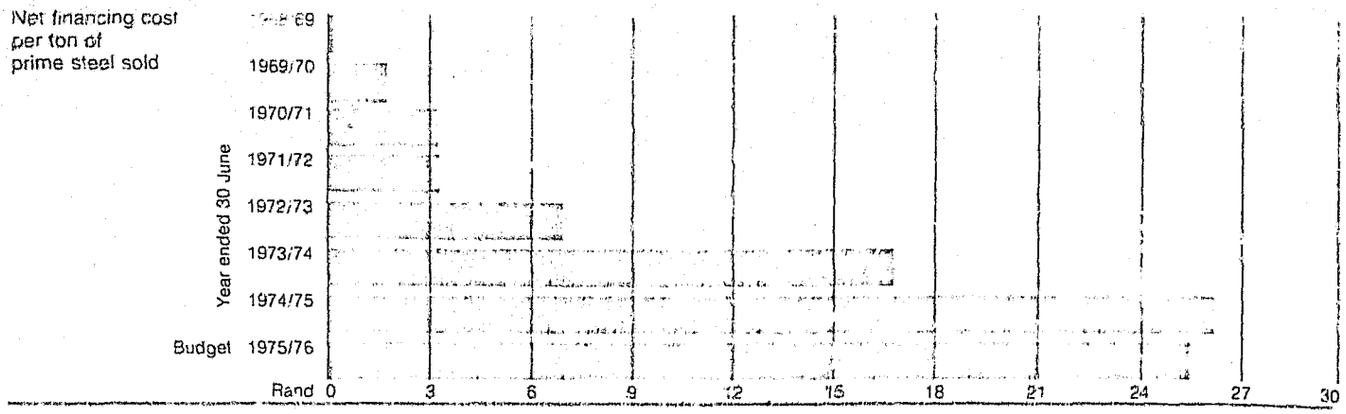
In last year's report to you it was mentioned that the Government would provide additional share capital to an amount of R170 million during the 1974/75 and 1975/76 financial years, R130 million of which would have been made available during the year under review. This amount was received from the Government in cash, and 65 million B shares of R2 each were issued at par to the State President. Even with this increase in share capital, Iscor's debt ratio – loan capital as a percentage of total net assets – rose to approximately 67 per cent during the year, owing to the large amounts which had to be financed from loan capital. Negotiations are at present being conducted with the Government to formulate a financing policy in terms of which a reduction could be effected in this debt ratio, which is considered to be unrealistically high. Arising from the negotiations and as a first step, the Government undertook, in addition to the share capital of R40 million still to be taken up in terms of the said arrangement, to take up a further 50 million B shares of R2 each for cash before 31 March 1976.

The loan financing of R563 million was arranged in the local and foreign markets and includes supplier's credit and other forms of project financing to a total of R183 million. Arrangements are continually made to meet as far as practicable that part of the Corporation's financing needs which has to be supplemented from foreign sources.

As has already been indicated, loans and supplier's credit to an amount of R92 million were redeemed during the year. R62 million of this was in respect of lump-sum repayments on loans which had become due. These redemptions were made from the proceeds of new loans negotiated for this purpose.

As was indicated last year, the high rate of expansion caused revenue from existing production units to be burdened with the high financing costs of production units under construction or in the running-in stage, which are therefore making no or only a minor contribution towards in-





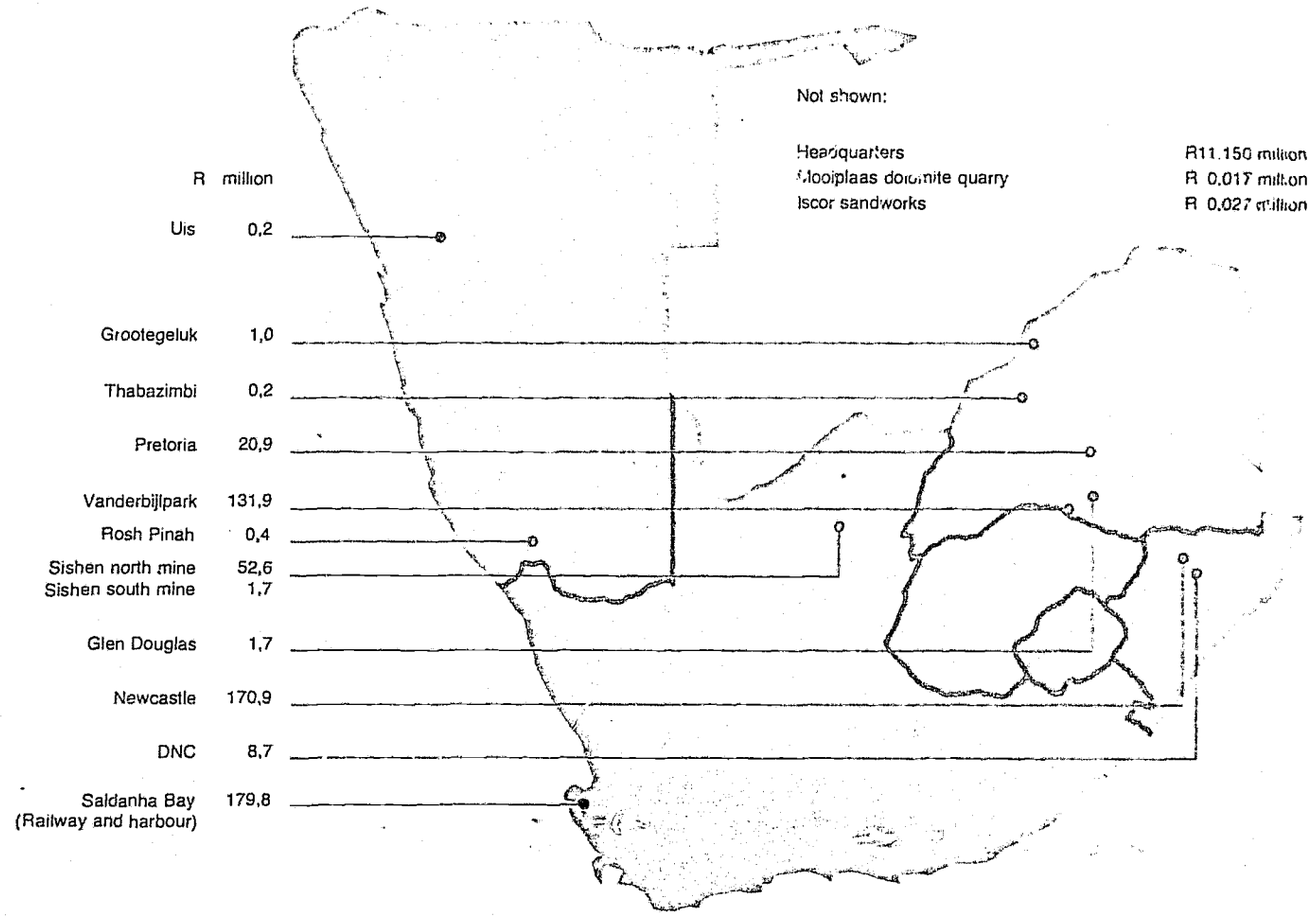
Capital expenditure of the Corporation and its associated mining companies for the year ended 30 June 1975

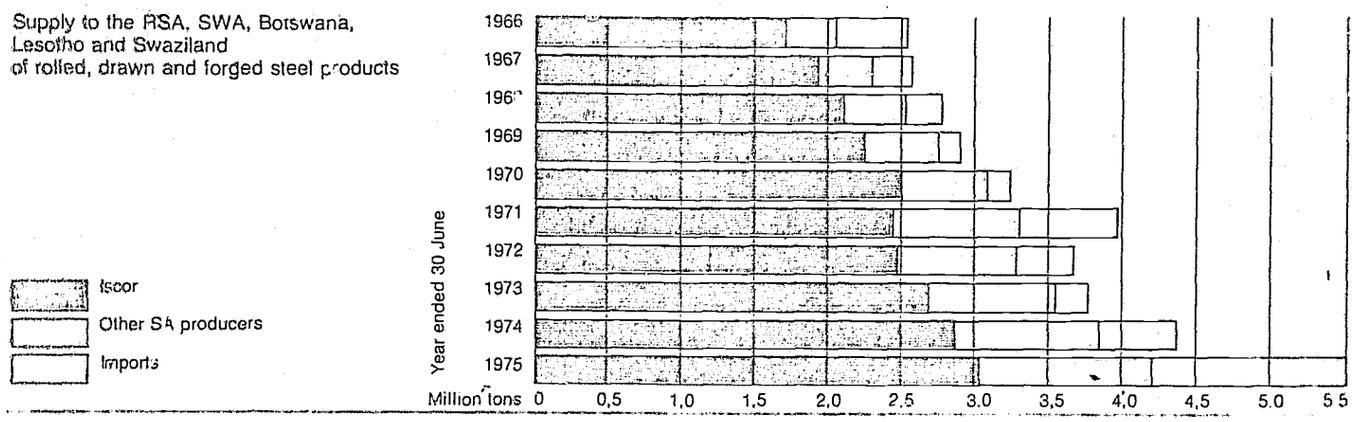
Value of work done:

Iscor (including Sishen north mine)	R392,1 million
Sishen-Saldanha Bay: Railway and harbour	R179,8 million
Associated mining companies	R 9,3 million
	R581,2 million

Not shown:

Headquarters	R11,150 million
Mooiplaas dolomite quarry	R 0,017 million
Iscor sandworks	R 0,027 million





ternal cash flow. Although trading profit and other revenue was approximately R37 million higher than the figure for the previous year, the Corporation nevertheless, owing to the high finance charges of R87,9 million, had a net loss of R35,9 million for the year under review. The improvement in trading profit is due, on the one hand, to the commissioning of more and more new production units which are beginning to make a contribution towards revenue and, on the other, to the fact that the ever-increasing production and other costs brought about by the high rate of inflation, which could not be recovered from higher productivity, could to some extent be off-set by increased steel prices.

In pursuance of its policy of maintaining steel prices as low as possible for as long as possible in order to make a contribution towards combating inflation to the benefit of secondary industry and the consumer, the Government limited the price increase of 1 January 1975 to an average of 10,3 per cent. Owing to the continually rapid cost increases, the steel price was further raised by an average of 15 per cent with effect from 20 June 1975. Since this price increase was effective for only the last 11 days of the financial year, it had no material effect on the year's operating results. However, the price increases were insufficient to yield a profit, after finance charges, from which a dividend could be paid to the Government. Accordingly, the Government once again waived its dividend on A and B shares in order to keep the price of steel as low as possible.

As a result of the relatively low domestic price of steel, no earnings on shareholder's equity were available for plough-back at the end of the financial year.

The Government cannot be expected to continue indefinitely with a price and financing policy which results in shareholders' funds yielding no return. In view of this, attention is also being given, in the above-mentioned negotiations with the Government on future financing policy, to the formulation of a revised price and expansion policy, as far as it is possible and in the national interest to revise existing policy directives.

Iron and steel production

Total blast furnace production amounted to 4 215 631 tons, compared with 4 110 425 tons the previous year, reflecting an increase of 105 206 tons, or 2,6 per cent. To this total the Vanderbijlpark, Pretoria and Newcastle Works contributed 2 065 292, 1 369 009 and 737 684 tons of liquid iron, respectively, whilst 43 646 tons of liquid ferro-manganese were produced by the Newcastle Works.

The joint liquid iron production of 4 171 985 tons, used for pig iron and the production of steel, represents an increase of 128 722 tons, or 3,2 per cent, over the comparative figure for the previous year. Production of ferro-manganese was 38 736 tons, as against 59 664 tons the previous year.

Ingot steel production totalled 4 349 667 tons, which was 313 154 tons, or 7,8 per cent, higher than the figure for the previous year. To this figure the Vanderbijlpark, Pretoria and Newcastle Works contributed 2 966 577, 1 373 132 and 9 958 tons, respectively. In addition, the latter works produced 306 221 tons of continuously cast blooms direct from molten steel.

Marketing

Sales revenue

The net sales value of all products sold during the year, amounted to R601 860 230, as compared with R444 839 836 in the previous financial year. The tonnages and net sales value, f.o.r. works, for the various product groups are as follows:

Product	Tons	Sales value f.o.r. works R
Prime steel products	3 346 323	569 113 708
Pig iron, steel off-cuts and scrap, iron ore and miscellaneous	2 975 253	38 713 618
Coke oven by-products	188 694	9 127 936
Total	6 510 270	616 955 262
Less: Settlement discount, etc.		15 095 032
Net sales value		601 860 230

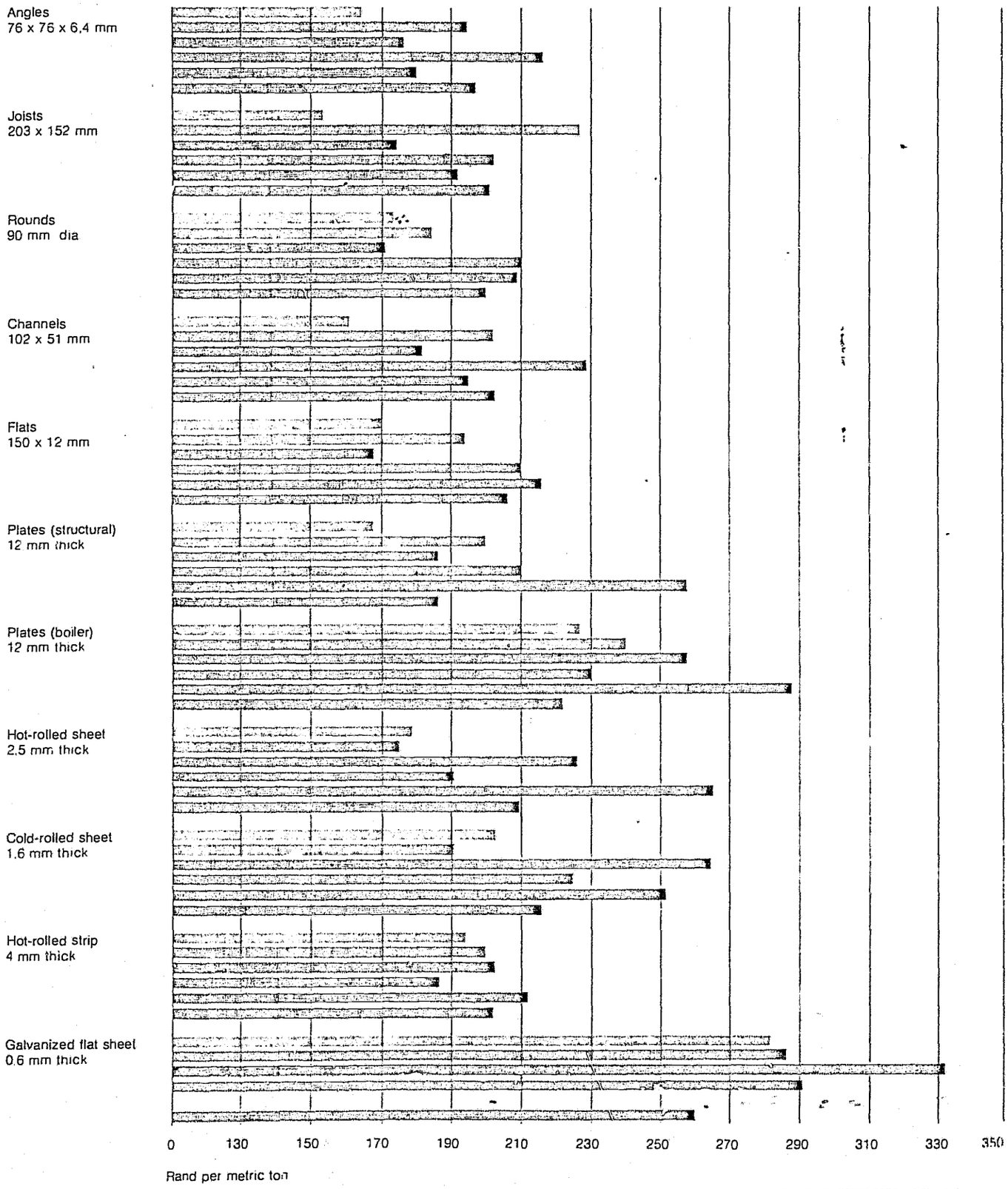
The total tonnage and the net sales value represent a decrease of 6,8 and an increase of 35,3 per cent, respectively, compared with the figures for the previous financial year. The tonnage and sales value of prime steel products sold, show an increase of 6,7 and 37,7 per cent, respectively, in comparison with the previous year.

According to calculations, the two price increases which came into force during the year under review and to which reference has already been made, contributed about R32 million to the sales value of steel products. The products exported during the year have been included in the sales figures whilst the finished steel products imported by the Corporation on behalf of customers, have not been taken into account.

Comparison of domestic prices
of representative steel products
in the RSA, UK, Australia, USA, France
and West Germany in rand per metric ton

6 September 1975

Iscor
UK
Australia
USA
France
West Germany



Sales of steel products

The following is an analysis of steel sales according to broad product groups:

Product group	Tons	
Semi-finished products (semis)		106 400
Profile products:		1 090 400
Structural sections, bars and coiled rounds	479 000	
Rails and fishplates	283 400	
Wire rod and wire	321 800	
Forgings	6 200	
Flat products:		2 149 500
Plates	586 800	
Uncoated sheet	753 600	
Strip	275 200	
Galvanized sheet	321 700	
Tinplate and blackplate	212 200	
Total		3 346 300

The above figures include 142 801 tons of steel products with a sales value, f.o.r. works, of R21 733 002, used by the Corporation for its own extensions.

Share of the market

During the year an estimated total of 5 638 200 tons of rolled, drawn and forged steel products from South African and overseas sources was supplied to consumers in the Republic, South West Africa and neighbouring African states. This reflects an increase of approximately 845 000 tons, or 17,6 per cent, over the adjusted total of 4 793 200 tons supplied during the previous year.

Of the 5 638 200 tons, Iscor supplied 56,6 per cent and other South African producers 20,5 per cent, whilst 22,9 per cent was imported. The comparative adjusted percentages for the previous year were 63,9, 21,0 and 15,1, respectively.

Of the tonnage obtained from South African sources, the Corporation supplied 73,4 per cent and other steel producers jointly 26,6 per cent, as compared with 75,3 and 24,7 per cent, respectively, for the previous financial year.

Prices

The increase of 10,3 per cent net in the official price of steel products, which became effective on 1 January 1975, was applied proportionately to all products. Its effect on the Corporation's product range averaged R16,02 per ton net. The extras and deductions were adjusted by the same percentage in order to maintain the mutual price relationships between the product groups.

The further price increase by an average of 15 per cent net, or R24,83 per ton on the Corporation's range, which became effective on 20 June, however, was applied selectively to the various products in percentages ranging from 12 to 17. The extras and deductions were again adjusted by the same percentages by which the basis prices of the products concerned were increased, but the quality extras on flat products were revised on the basis of the latest cost data and brought into account as part of the average increase.

Despite these two price increases, the Corporation's prices of the popular product types continue to compare favourably with the published domestic prices of comparable products in other countries, whilst the price gap in respect of more specialized products has been considerably narrowed.

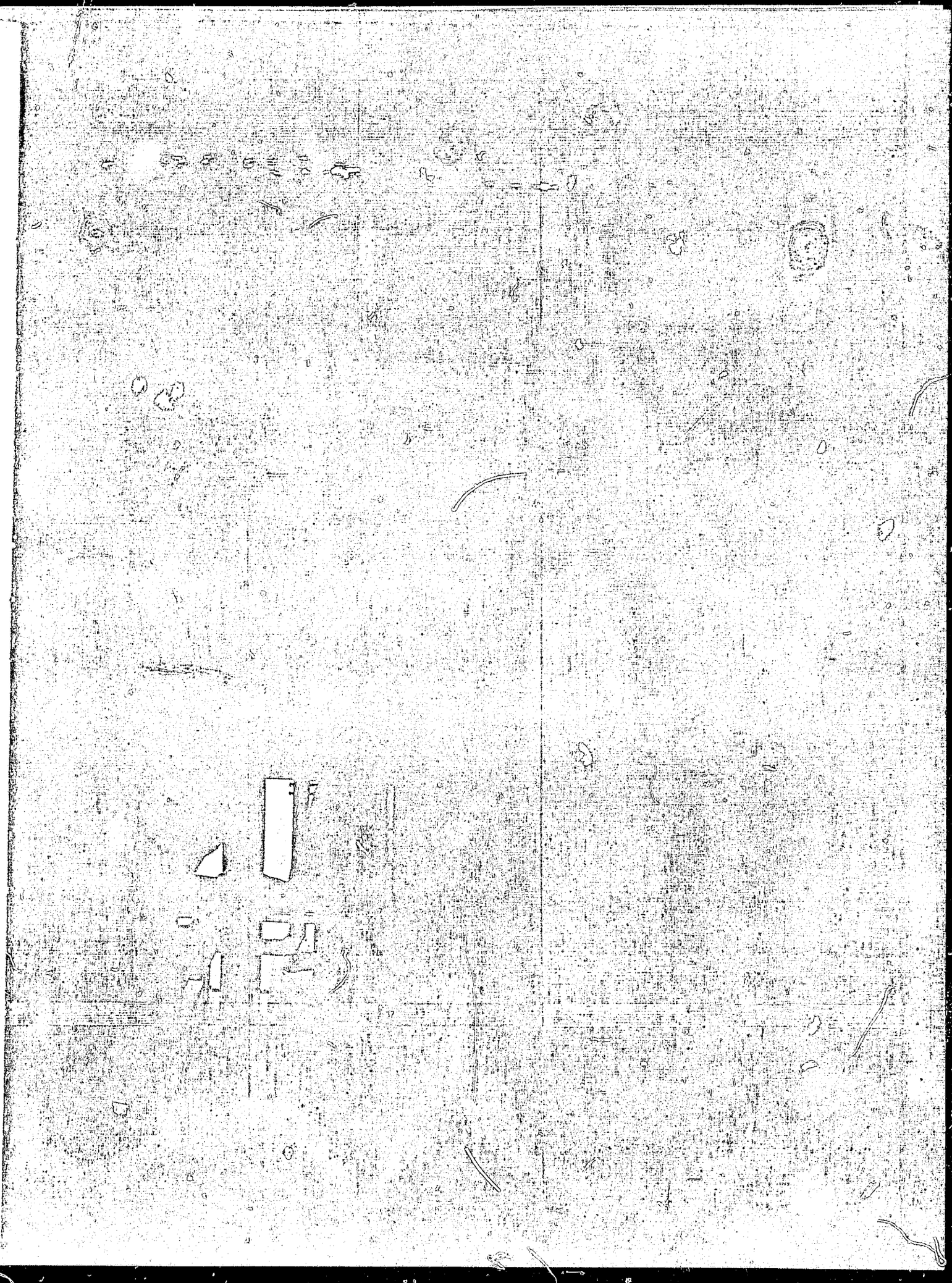
On both occasions the prices of pig iron were also increased. On 1 January 1975, an increase of 10,3 per cent was applied selectively, as in the case of steel, to the various grades of pig iron to bring the mutual relationship of the prices for the various grades into line with production costs. The cost increases in respect of coking coal and iron ore, as well as increases in railage tariffs, had proportionately a much greater effect on the costs of pig iron than on those of finished steel products, in respect of which the prices were increased by an average of 10,3 per cent. Accordingly, with the price increase of 20 June the price of pig iron was adjusted by a higher percentage than that of steel products, namely by 25 per cent net, or an average of R14,61 per ton. If the same average percentage as in the case of steel products had been applied to the prices of pig iron, it would mean that pig iron would be supplied to customers at below cost.

Demand

By the end of 1974 it was already clear that the abnormally high demand for primary steel products, which had prevailed during the preceding two years, would not continue during 1975.

Flat products

As was expected and already indicated in the previous report, there was a decline in the demand for galvanized and cold-rolled sheet in particular, mainly on account of diminished order levels within the building, motor vehicle and white products industries. In addition, the delay in arrival and the consequent accumulation of large tonnages of imported cold-rolled sheet at South African harbours and therefore simultaneous deliveries to customers, led to an unavoidable increase in customers' stocks, beyond their



normal operational levels. A temporary drop in orders for this product is currently being experienced. According to present indications, however, an increase in the demand will again be evident, possibly from the middle of 1976. Owing to the decrease in demand on the one hand, and an increase in production capacity on the other, it is expected that the Corporation will be able to meet, with the exception of a small tonnage of special quality plates which will have to be imported, the total demand for flat products during the 1975/76 financial year.

Profile products

The demand for virtually all profile products again exceeded production capacity during the past financial year. Towards the end of the year under review, a levelling off in the demand for certain light products was experienced, but in contrast with this trend the demand for the heavier types does not show any decline, with the result that local production had to be supplemented with imported steel.

The demand for wire, wire rod, small sections and bars could be met virtually in full at the end of the financial year as a result of the commissioning of new production units at the Newcastle Works. Present indications for the next financial year are that the slackening in the economy as a whole, and particularly the decline in the building and mining industries, as well as in agriculture, will have a dampening effect on the market for small sections and wire. Arrangements are being made to warehouse stocks of process material and even some finished products, as a first step towards ensuring continuous full utilization of the mills, within the limits of raw steel and billet availability. If the domestic market should take longer to recover than is presently expected, and depending on steel availability, it might become necessary to export certain light products later in the next financial year, provided this is economically justified. However, overseas price levels are uneconomically low at present, and many countries are already producing well below their normal operating capacities.

As far as the heavier profile products are concerned, an improvement in the supply position can be reached only after the new heavy mill of the Pretoria Works and the medium mill of the Newcastle Works have come into full operation.

Imports

The total quantity of rolled, drawn and forged steel products, excluding semi-processed products for rerolling, imported during the financial year, amounted to 1 294 100 tons, as compared with the adjusted 854 400 tons during the previous year. The increase of 439 700 tons is mainly the result of the larger domestic demand during the last six months of 1974 and involves a wide range of steel products. Of the imports, Iscor obtained, still at the request of the Government, approximately 724 800 tons under the general levy and import subsidy scheme on behalf of customers.

Imports of steel products by Iscor on behalf of customers during the latter half of 1975 are expected to total about 97 000 tons. A small portion of this was ordered for delivery during the first half of 1975, but owing to late arrival of ships, delivery was delayed until the second half of the year.

As a result of the decline in the local demand, which was mentioned earlier, only about 33 600 tons of steel products, excluding semi-processed products for rerolling, will be imported in the first half of 1976 according to present estimates.

Simultaneously with the general steel price increase on 20 June, the levy on consignments of South African and imported steel products destined for the home market, was raised from R7,35 to R10,25 per ton gross. This was considered necessary in an effort to reduce the debit balance of the import levy pool at an accelerated pace. As is shown in the balance sheet, this debit balance stood at approximately R246 million at the end of the financial year. The financing of the steel import scheme is undertaken by the Government.

Even with the increase in the levy of R2,90 per ton gross, and with due consideration of the estimated further importation of steel, it is not foreseen that the steel import scheme will be terminated before 1980.

Steel export promotion

The iron and steel export promotion scheme, which is administered by Iscor on behalf of the Department of Industries, is showing a credit balance of R3,6 million.

Exports

During the financial year, Iscor established an International Marketing division for the handling of imports and the promotion of the Corporation's international iron and steel marketing activities, as well as for the marketing and bulk shipment of iron ore through Saldanha Bay.

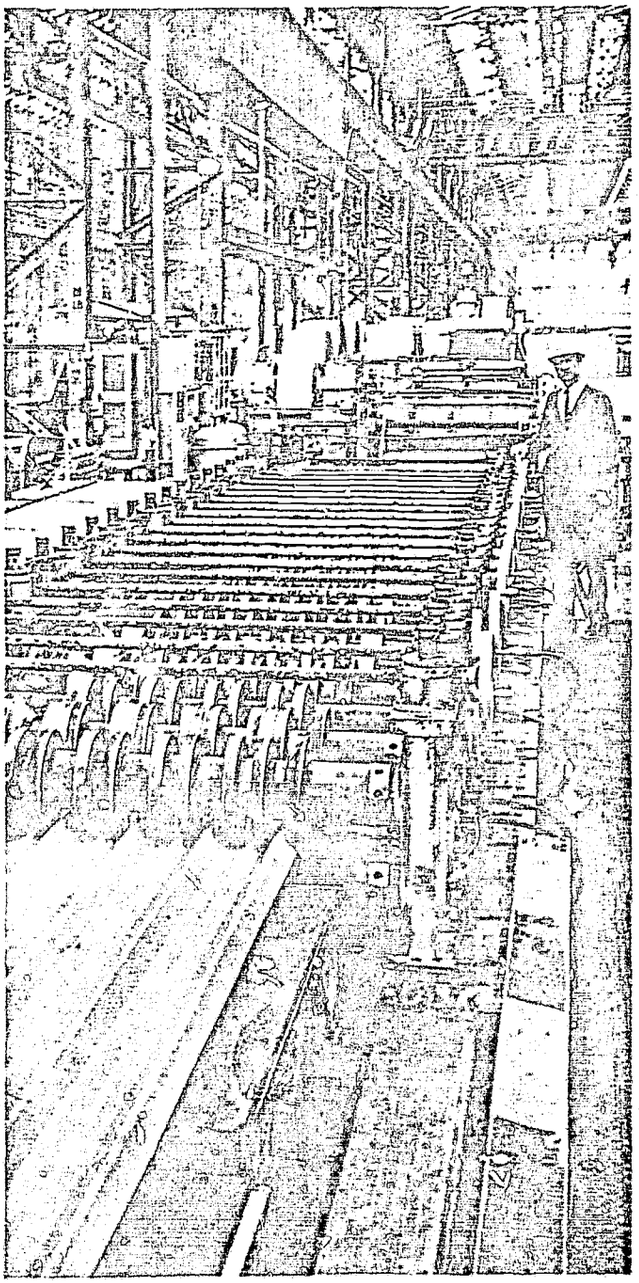
In terms of the Corporation's policy of annually supplying a limited tonnage of steel to established foreign markets and customers, 130 600 tons of rolled and drawn steel products, including 29 000 tons of billets, were exported to overseas countries during the financial year. In addition, 490 200 tons of iron ore were exported, whilst 50 700 tons of pig iron were supplied to Japan to complete the long-term contract entered into in 1964. Total earnings from these exports during the year amounted to R22,8 million.

Rationalization and standardization of structural sections

In collaboration with the South African Rolled Steel Producers Co-ordinating Council, the South African Bureau of

Scrap being charged into a 150-ton electric arc furnace at the Vanderbijlpark Works.

A view from the control cabin towards the finishing stands of the 2 050 mm hot-strip mill at the Vanderbijlpark Works.



Colour-coated sheet being rolled experimentally into the Delta-Rib profile on the roll-forming line at the Vanderbijlpark Works.

Standards and some large South African consumers of rolled steel sections, the standard dimensions and shapes of angles, channels, beams and columns to be offered locally in future, were finalized. Conversion to the new ranges of angles and channels will be effected over a period of three years.

For equal and unequal angles there already exists an International Organization for Standardization (ISO) standard from which a range of applicable sizes may be selected for the local market. For channels, however, there is no accepted ISO standard at present. Since numerous opinions indicate that the Deutsche Industrie Normen (DIN) range of channels will probably be accepted in due course as Euronorm and subsequently as ISO standard, the DIN-1026 (UPN S range), as well as a few special sizes was accepted for future local production.

As far as universally rolled beams, columns and bearing piles are concerned, there are still differences of opinion in respect of a common size range and standard dimensions Thorough investigation has revealed that the current British Standard offers a more effective size range. After further consideration and with due regard to the fact that another South African steel producer only recently commenced with the marketing of universal beams, columns and piles to the British Standard, the Corporation decided to continue offering a suitable range of beams, columns and bearing piles to this standard on the local market.

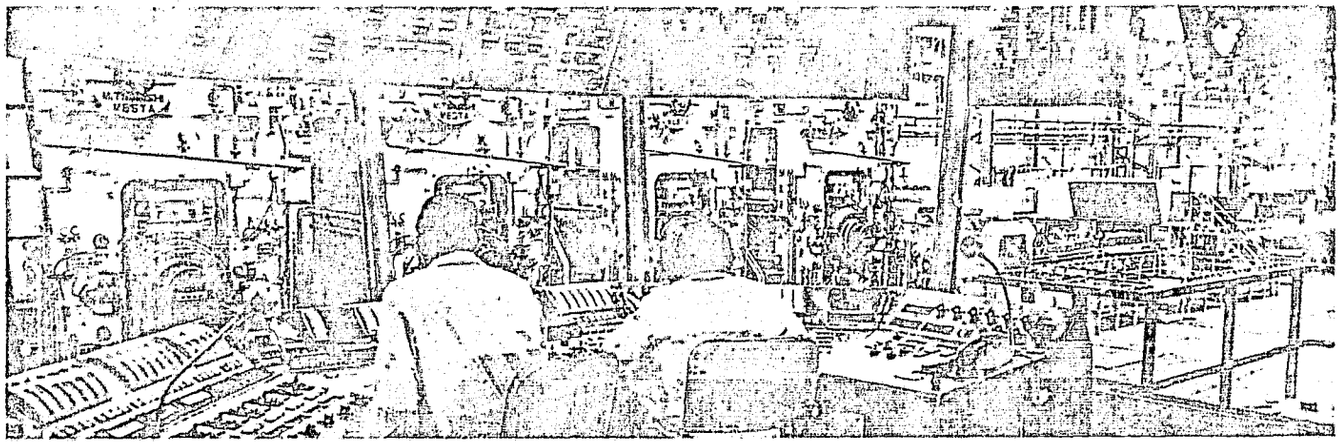
Full-hard Supraspan S-Rib roof sheeting

Iscor's well-known Supraspan S-Rib corrugated galvanized sheet in long lengths is now available in a new form – a thinner (0,5 mm) and therefore lighter corrugated galvanized carbon steel sheet, marketed as "full-hard" Supraspan S-Rib. It will meet the demand for a more economical roofing and cladding sheet. Coverage is 18 per cent more than with the same tonnage of ordinary corrugated galvanized sheet of standard thickness (0,6 mm), whilst a calculated saving of 10,5 per cent in material costs can be achieved by using this product. A further advantage is that a lighter roof construction is possible. Full-hard Supraspan S-Rib is available in lengths ranging from 3,3 to 12,3 m and in widths of 8½ and 10½ corrugations. There is a choice of three zinc coatings, ensuring successful application under various corrosion conditions.

Colour-coated sheet

The production of colour-coated sheet, to which reference was made in the 1972 report, should commence at the Vanderbijlpark Works in the second quarter of 1976.

The trade names – Chromadek for prepainted sheet and Textradek for plastic-laminated sheet – have already been registered. After intensive research and practical tests a range of standard colours was developed which is ex-



pected to meet the consumer requirements under South African conditions.

During the year the Corporation also imported nominal quantities of colour-coated sheet, of a quality similar to that which will be locally produced, and rolled it into the Delta-Rib profile on an experimental basis. These sheets will be used as roofing and cladding for the new coal washing plant at Durnacol.

By-products

During the year a company, Iskop (Pty) Limited, was established jointly by Iscor and Koppers Company Inc. of the USA on a 50:50 shareholding basis. Using the specialized knowledge of Koppers, Iskop will in future process crude tar from the three Iscor Works into a wider range of products than was previously produced by Iscor, and to closer specifications.

Marketing of bright bar

Towards the end of the year under review, the Corporation negotiated with a private firm to take over the production of bright bar. Although Iscor had been one of the first to manufacture this product locally, private companies were established which, in the course of time, made representations for Iscor to discontinue its activities in respect of this product. As a result of the negotiations, it was decided that Metkor Investments Limited would obtain a minority share in the private undertaking concerned and that the latter would then purchase the production plant, so that the Corporation would not suffer any capital loss.

Extensions

It continues to be the Corporation's policy to supply as much of the country's main steel products as it is able to, on a long-term basis. Owing to various factors, however, such as fluctuations in the national economy, high capital requirements, the coking coal problem and the shortage of trained manpower, Iscor has been obliged to revise and limit the expansion programme announced last year in order to adapt it to current conditions.

The modified plan provides for an increase in the production capacity of the three works to not more than 7 million tons of liquid steel in 1977/78. The rate of expansion for the remainder of the ten-year period extending to 1985/86, is at present being investigated in collaboration with the Government. To raise the production capacity to 7 million tons per annum and to complete the Sishen-Saldanha Bay project for the exportation of iron ore will require an amount of approximately R1 800 million after the end of the year under review, calculated at July 1975 prices. The capital expenditure on any further extensions which will be required to enable the Corporation to keep pace with the ever-increasing demand for Iscor steel, which is estimated at 10,4 million tons of finished products, i.e. 14 million tons of liquid steel, by 1985/86, will of course be considerably higher.

In the investigation at present being undertaken by Iscor and the authorities concerned, due account is taken of the restrictive effect it would have on the national economy if Iscor did not expand fast enough to keep up with the rising demand for steel and, secondly, with the effect on the currency position if the Republic were to continue importing large tonnages of steel every year.

Vanderbijlpark Works

Considerable progress was made with the expansion and modernization programme at this works, which was mentioned last year, and the following major production units were commissioned during the year under review:

- The last of the three LD steel furnaces, each with a capacity of 150 tons. Total plant capacity is about 267 000 tons per month. The cost of the whole plant, including the gas cleaning equipment, amounts to R41 million. This plant is an addition to the existing steel-melting plant.
- A 5 × 1 850 mm shearing line, with a monthly capacity of 21 000 tons; a 10/13 × 1 850 mm slitting line, with a monthly capacity of 13 000 tons; and a 2 050 mm single-stand temper mill, with a monthly capacity of 33 000 tons, for the processing of hot-rolled sheet. The total costs amount to R8 million.
- A computer-controlled 2 050 mm five-stand cold-strip mill (product width 1 850 mm), with a capacity of 66 000 tons per month, at R78 million.
- A 2 050 mm single-stand cold-strip temper mill (product width 1 850 mm), with a capacity of 60 000 tons per month, at R7,5 million.
- Two 2 × 1 850 mm cold-strip shearing lines, each with a monthly capacity of 13 000 tons. Together with the stretcher levelling line and the coiling line, which will be completed soon, the cost amounts to R15 million.
- The first 68 single-stack batch annealers. Together with an additional 54, which will be commissioned by the middle of 1976, the capacity will be 61 000 tons per month and the total cost R8 million.

The following production units are still to be commissioned:

- The first two of the three additional coke-oven batteries, each consisting of 55 ovens, will commence production before February 1976 and the third in 1977. The total cost of these will amount to R40 million.
- A third 150-ton electric arc furnace, early in 1976, at R12 million, including the cost of two cranes.
- Two continuous slab-casting machines with a joint capacity of 125 000 tons per month, in 1976, at a combined cost of R59 million.

- A vacuum degassing plant for the electric arc furnaces, at R5 million.
- An additional galvanizing line of 4 × 1 600 mm, with a capacity of 20 000 tons per month, at R17 million.
- A continuous painting and laminating plant, with a monthly capacity of 9 000 tons, at R6 million.

With the equipment already in operation and the above units still to be installed, this works will be capable of producing and processing approximately 3,6 million tons of liquid steel per annum.

Newcastle Works

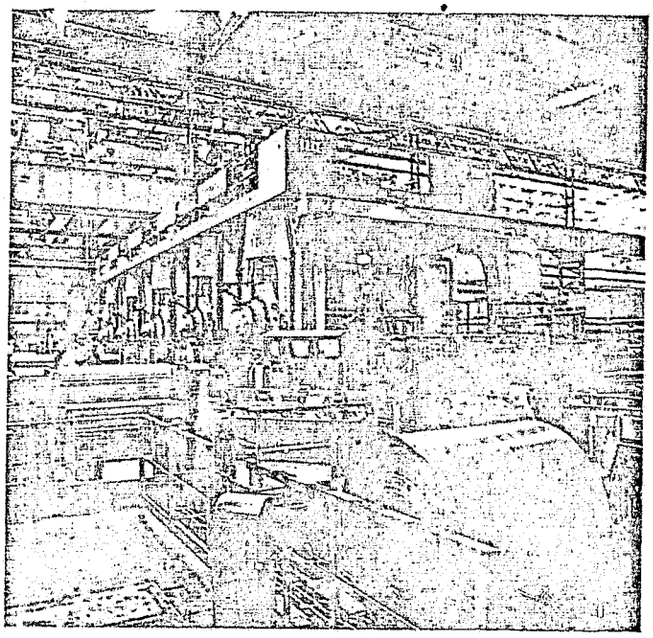
At this youngest Iscor Works, which produced its first steel in March 1974, various new plants were commissioned in the past financial year, with a resultant increase in production.

The following units were put into service during the year:

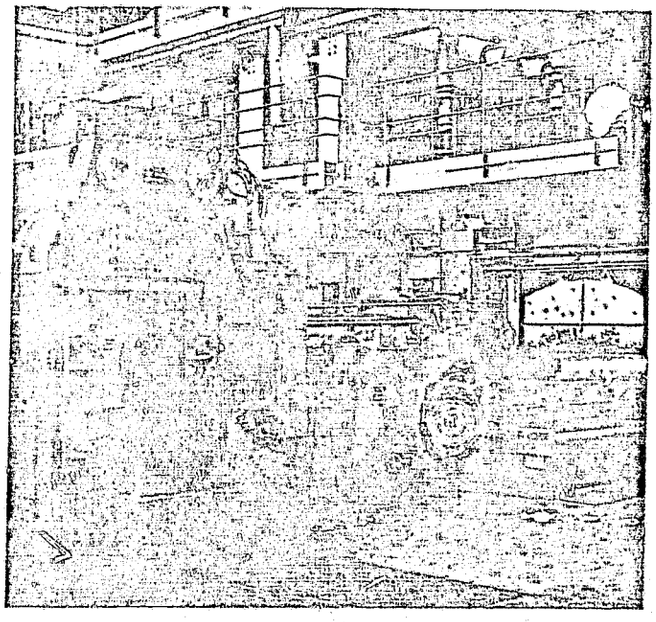
- The last of three LD steel furnaces, each with a capacity of 150 tons. Total plant capacity is about 230 000 tons per month. The cost of the whole complex, including buildings, cranes and ancillary equipment, amounts to R75 million.
- A third continuous bloom-casting machine, with an eventual capacity of 40 000 tons per month, at R9 million.
- A bar mill, capable of rolling 300 different sections, with a monthly capacity of 45 000 tons, at R60 million.
- A rod mill, with a capacity of 27 500 tons per month, at R50 million.
- A wire drawing and galvanizing plant, with a capacity of 7 000 tons per month, at R12 million.

The following production units are still to be commissioned:

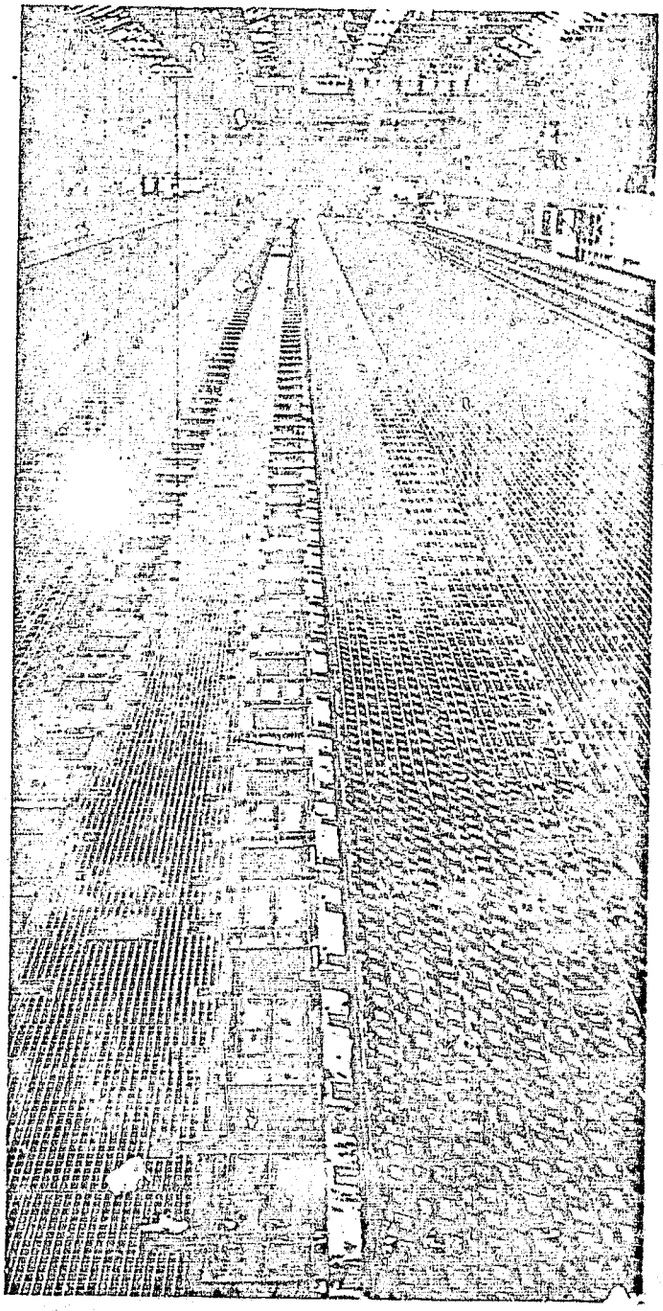
- The last 100 of 200 coke ovens, at a total cost of R82 million.



The entry end of the new 2 050 mm cold-strip mill at the Vanderbijlpark Works.



The billet reheating furnace and the first stand of the rod mill at the Newcastle Works.



The bar mill cooling beds at the Newcastle Works.

- A new blast furnace of 3 500 tons per day, with ancillary equipment at R68 million.
- A continuous slab-casting machine, with a capacity of 60 000 tons per month, at R20 million.
- A medium mill, with a capacity of 33 000 tons per month, at R73 million.

When all the above production units are in operation, the first phase of the extensions at this works will be completed and its liquid steel production will amount to about 2 million tons per annum.

Pretoria Works

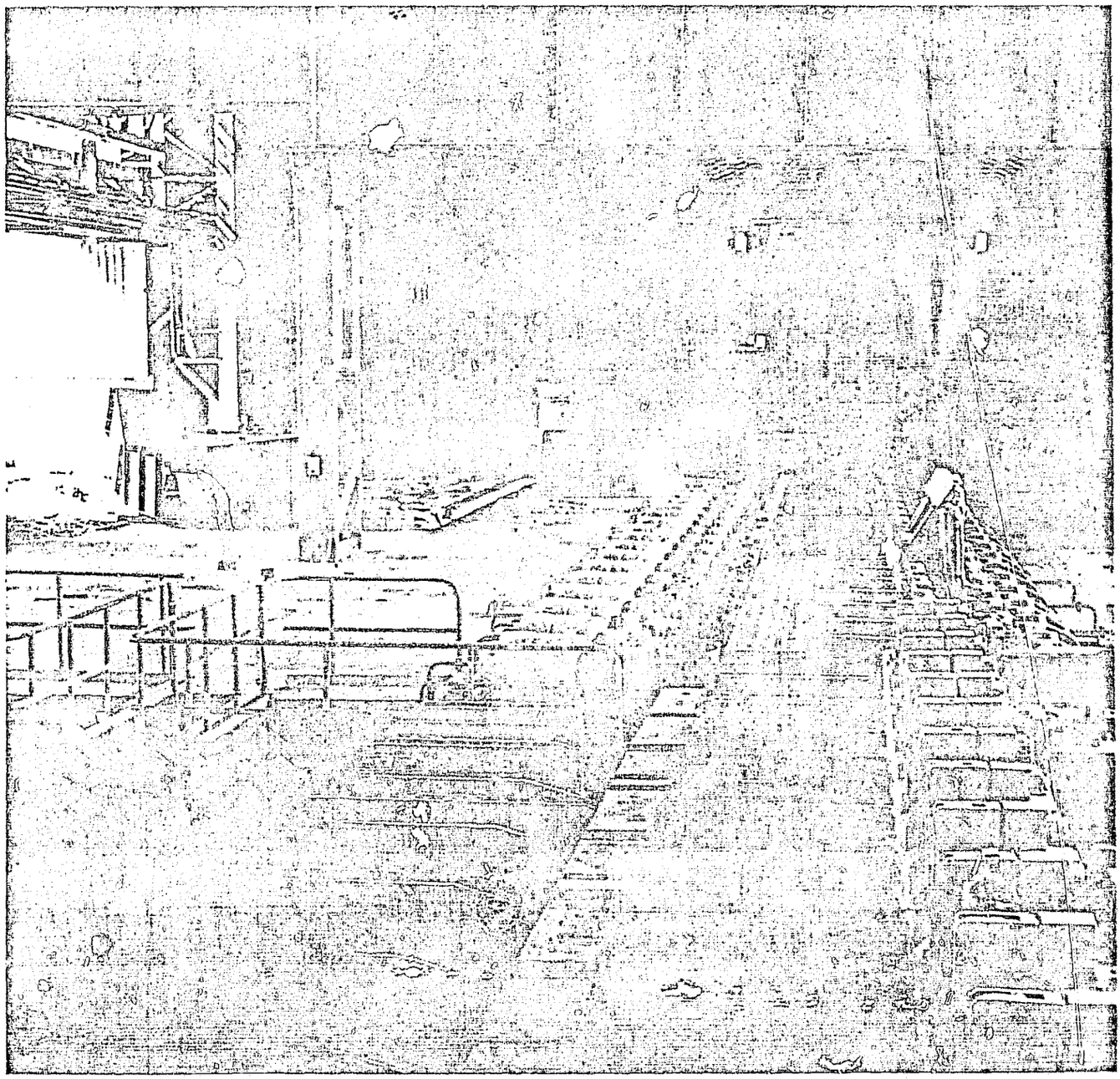
This oldest Iscor Works is at present being modernized, but on account of limited space some of the extensions had to be planned for a new site. In view of this, land was purchased at Rosslyn, north of Pretoria, after negotiations with the authorities concerned. However, no finality has yet been reached in this matter.

The most important extension currently in progress at the Pretoria Works is the modernization of the heavy-mills complex, at a cost of approximately R100 million, in order to raise production to 70 000 tons per month.

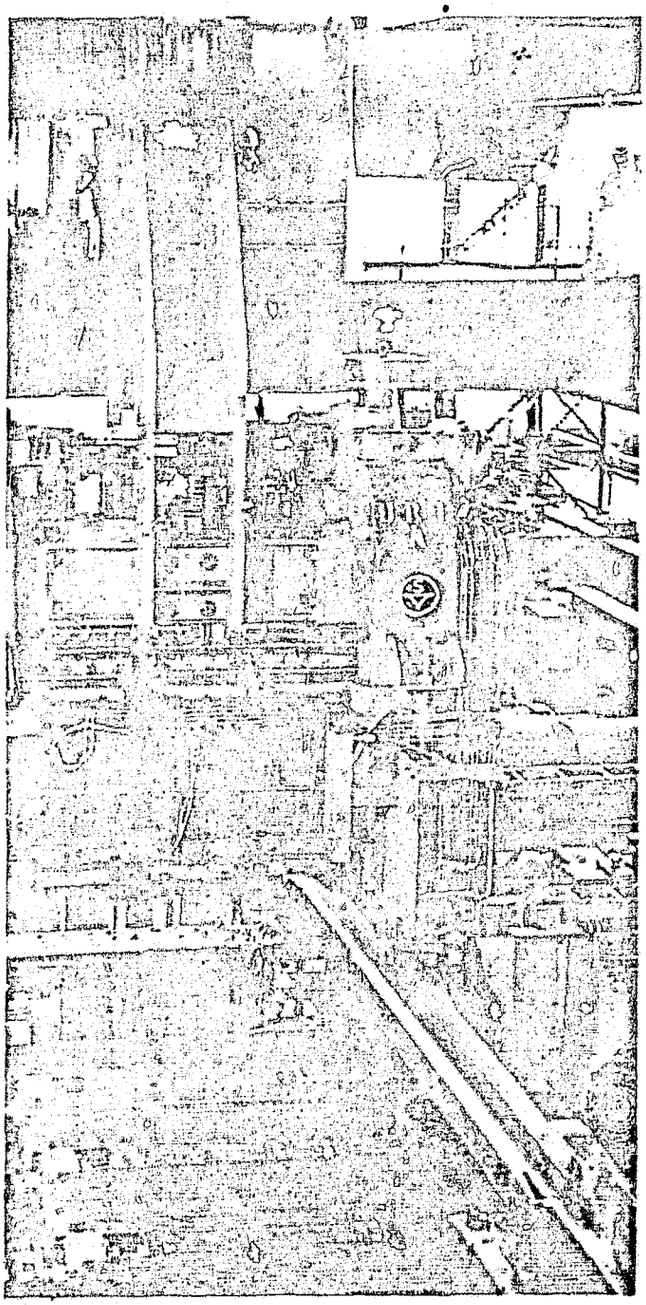
The following extensions are planned:

- A blending plant for equalizing the coal supply to the coke ovens, at R6 million.
- Replacing four existing coke-oven batteries, at R23 million.
- The erection of a steel plant for the manufacture of special steels for forgings, with a capacity of 5 000 tons per month, at R11 million.
- Increasing the production capacity of the forge press, at R6 million.

When the extensions mentioned have been completed, the annual capacity of this works will amount to 1,4 million tons of liquid steel.



The roll-out table from the continuous billet mill to the cooling beds at the Newcastle Works



One of the two roughing stands of the new heavy mill at the Pretoria Works.

Supplies

The value of the Corporation's total stocks after deduction of depreciation, increased by approximately 55 per cent to R251 million, comprising R97,5 million in stores stocks, R128,5 million in process materials, rolls and ingot moulds, and R25 million in raw materials. The value of stores stocks after depreciation, expressed as a percentage of the replacement value of total corporate fixed assets, has decreased to 4,7 per cent, compared with 5,3 per cent in 1974.

The value of contracts concluded and orders placed for capital plant and equipment, including civil engineering work on capital extensions, was R288 million. The value of orders placed for consumable stores, refractories and spares amounted to R171 million, and for purchased raw materials to R126 million. The value of the Corporation's total buying activity for the year under review was therefore approximately R585 million, compared to R548 million in the previous financial year.

Reclamation activities covering the sale or use of reclaimed and redundant materials, spares, etc., yielded approximately R4,8 million, compared with R1,85 million in the previous financial year.

Mining

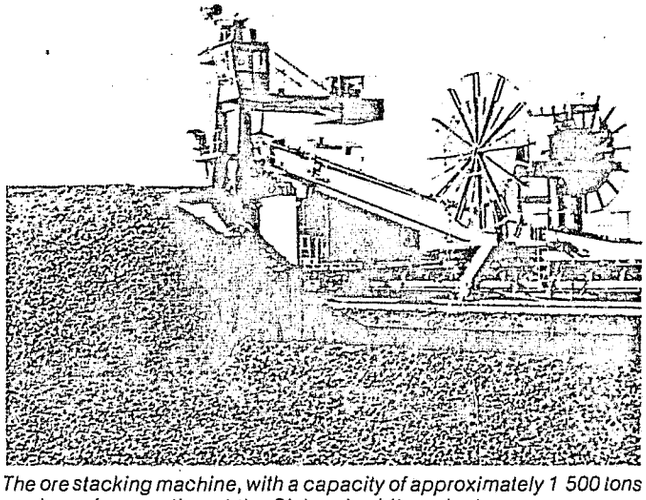
To satisfy the Corporation's growing needs for raw materials, large-scale extensions were continued with at virtually all the mines and quarries during the year under review.

Iron ore

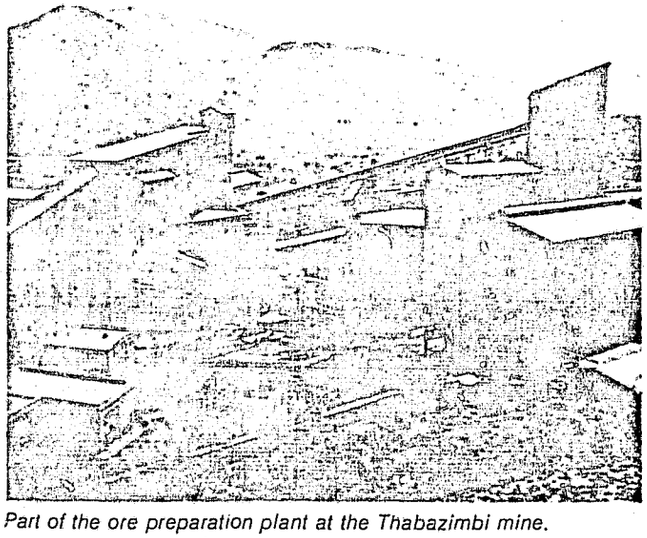
Dispatches of iron ore from Sishen increased by about 12 per cent over the figure for the previous financial year and amounted to 4 352 300 tons, of which 509 400 tons were destined for export, mainly to Japan, and 58 100 tons were sold in the Republic. The remainder of the tonnage was dispatched to the Newcastle and Vanderbijlpark Works. At the beginning of August 1974, a start was made with stripping of the overburden for the new mine at Sishen, and at the end of the financial year 3 900 000 tons (1 350 000 cubic metres) of waste had already been stripped and 500 000 tons of iron ore exposed. This mine will start with the actual production of iron ore in November 1975.

As a result of the increasing activities at the mine, the number of employees and therefore also the housing needs became greater. During the year, 311 houses were completed at Kathu, the new township, thus bringing the present total to 500 houses.

The Thabazimbi mine, which supplies iron ore mainly to the Pretoria Works, dispatched 2 107 800 tons of screened ore during the year, which was slightly less than the previous year's tonnage.



The ore stacking machine, with a capacity of approximately 1 500 tons per hour, in operation at the Sishen bedding plant.



Part of the ore preparation plant at the Thabazimbi mine.

Coal

The production capacity of the coking coal mine, The Durban Navigation Collieries (Pty) Limited, a wholly-owned iscor subsidiary, was considerably extended during the year. This mine is the largest supplier of straight coking coal to the Corporation. The tonnage delivered to the three works, amounted to 945 400, whilst a further 1 525 600 tons of straight coking coal were purchased from other collieries in Northern Natal, in addition to 2 333 100 tons of blend coking coal from various mines in the Witbank area. Apart from this metallurgical coal, the Corporation had to purchase an additional 418 400 tons of ordinary coal for the generation of steam and gas.

Last year it was mentioned that a new coal mine was being planned in the Waterberg area. Preparatory work on the opening-up of this mine, which will be known as the Grootegeluk coal mine, is already under way. Production is expected to commence in the second half of 1978, and initially 1 820 000 tons of coking coal per annum will be produced by open-pit mining. In the course of the 1975/76 financial year, about 2 million cubic metres of overburden are expected to be removed. A contract for the building of 300 houses has been concluded.

Dolomite

To meet the increased demand for metallurgical dolomite, large-scale extensions were undertaken at the Corporation's dolomite quarry at Glen Douglas. During the year under review, 381 300 tons of dolomite were dispatched to the Vanderbijlpark Works and 64 100 tons to the Newcastle Works, whilst the Mooiplaas quarry dispatched 471 700 tons to the Pretoria Works and 50 300 tons to the Vanderbijlpark Works.

Tin

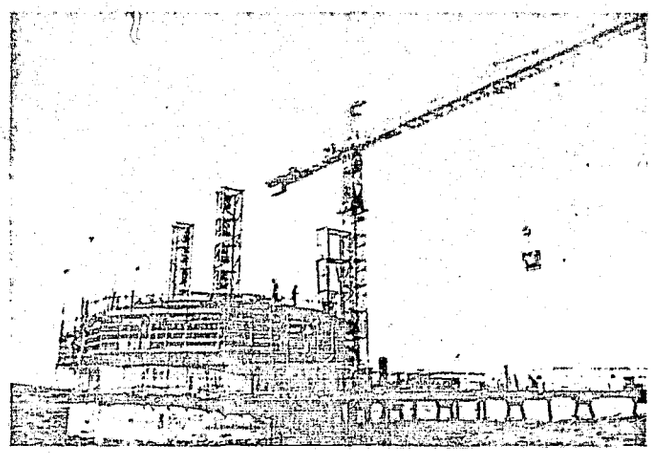
The Uis tin mine in South West Africa, which belongs to the Corporation's wholly-owned subsidiary, Industrial Minerals Mining Corporation (Pty) Limited, produced 1 177 tons of tin concentrate, with a tin metal content of 64,6 per cent. The concentrate was dispatched to the smelting plant at the Vanderbijlpark Works, where it represented 49 per cent of the Corporation's needs. The remainder had to be purchased.

Zinc

During the year, the Rosh Pinah zinc mine, operated by Imcor Zinc (Pty) Limited, in which Iscor has a controlling interest, dispatched 27 100 tons of zinc concentrate, with a zinc metal content of 52,3 per cent, to Zincor's works near Springs for processing. In addition, 5 288 tons of lead concentrate were produced and sold in South West Africa.

Sand

The sand preparation plant north-west of Pretoria was commissioned and the new technique of lining ladles with



One of the caissons for the ore-loading jetty taking shape

The Olifants River bridge, resting on 22 piers and 1 035 m in length, on the Sishen-Saldanha Bay railway line.

sand instead of refractory bricks has already led to a considerable saving.

Raw materials exploration

In various parts of the country, searches are being conducted for possible sources of coal. In the vicinity of Utrecht, in Natal, exploration was continued and the Corporation is concentrating on three areas determined from the findings of previous years. In one of these areas, Commissiekraal, coal was found which could be suitable for formcoke. In the Soutpansberg coal-field, reconnoitring exploration was carried out. Provisional diamond drilling indicates a good-quality coking coal, but owing to the steep gradient and the thin seams in which this coal occurs, it is likely to be very costly.

As far as iron ore is concerned, drilling is being continued on several farms in the Sishen area.

Further exploration work in respect of zinc ore is being undertaken in the existing mining area of Rosh Pinah and further north.

Exploration for carbonate fluxes in the Vanrhynsdorp district is proceeding, and there are indications that the limestone and dolomite reserves will be sufficient to justify exploitation.

Sishen-Saldanha Bay project

Work on the railway line and harbour has already reached an advanced stage, and the construction problems in connection with the harbour mentioned last year have, it is hoped, been overcome through changes in designs and methods, as well as by utilizing additional dredgers.

During the financial year, platelaying started from the Saldanha Bay end, and on 30 June a distance of 210 km had already been completed. Work on the only tunnel, at Baboon Point, was also completed in the course of the year, whilst the marshalling yards at the two terminals are virtually ready. It is expected that the railway line will be opened to traffic by the middle of 1976, as was originally planned. Offers for 25 electric locos have been received, and tenders for the electrification of the railway line are being invited.

In terms of a Government decision that the traffic of other parties will also be allowed on the railway line, various possible spurs linking up with the Sishen-Saldanha line are at present being investigated and considered in collaboration with the South African Railways.

The construction of the spending-beach type breakwater is progressing satisfactorily, and about 90 per cent of the underwater profile has already been completed. Dredging for the navigation channel, as well as the work on the ore stockpiling yard, has almost been completed. The causeway is already 1 600 m long, and only 600 m still remains to be built. Progress with the construction of the caissons and beams is quite satisfactory.

At the end of the financial year, 233 of the planned 294 dwelling units for White employees in the Saldanha area had been completed, whilst 251 houses in the township for Coloureds at Vredenburg had already been erected.

Semis works, Saldanha Bay

At one stage during the year the possibility was raised that the annual capacity of the proposed semis works would have to be reduced to 2 million tons, but at a meeting of the partners and the Corporation, held in Pretoria just after the end of the financial year, it was decided, on a proposal from the overseas partners, to proceed with the planning of a works with an annual capacity of 3 million tons, as was stated last year. No final decision has yet been taken on the yearly tonnage which is to go to each of the partners, but a proposed basis is presently being considered by all the interested parties.

As a result of the international shortage of capital, which is closely linked to the fuel crisis, and the exceptionally high escalation cost on engineering equipment, all the parties concerned were obliged once again to take thorough stock of the whole matter and to adapt it to the changed circumstances. The final approval of the Government to commence with the scheme is now being awaited.

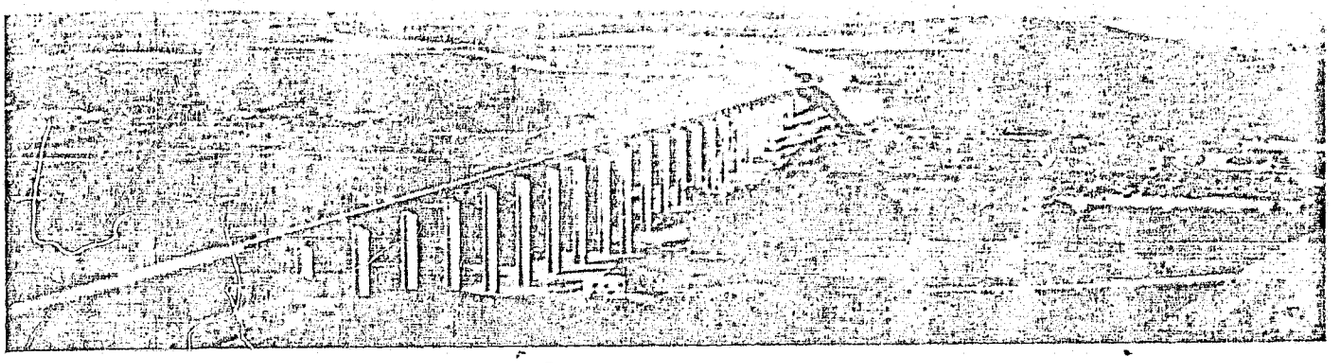
Iscor's shareholding remains 51 per cent, whilst the remainder will be divided among the foreign partners in accordance with the percentage of the production to be taken by each. Total loans will be guaranteed by all the partners pro rata to their tonnage off-take.

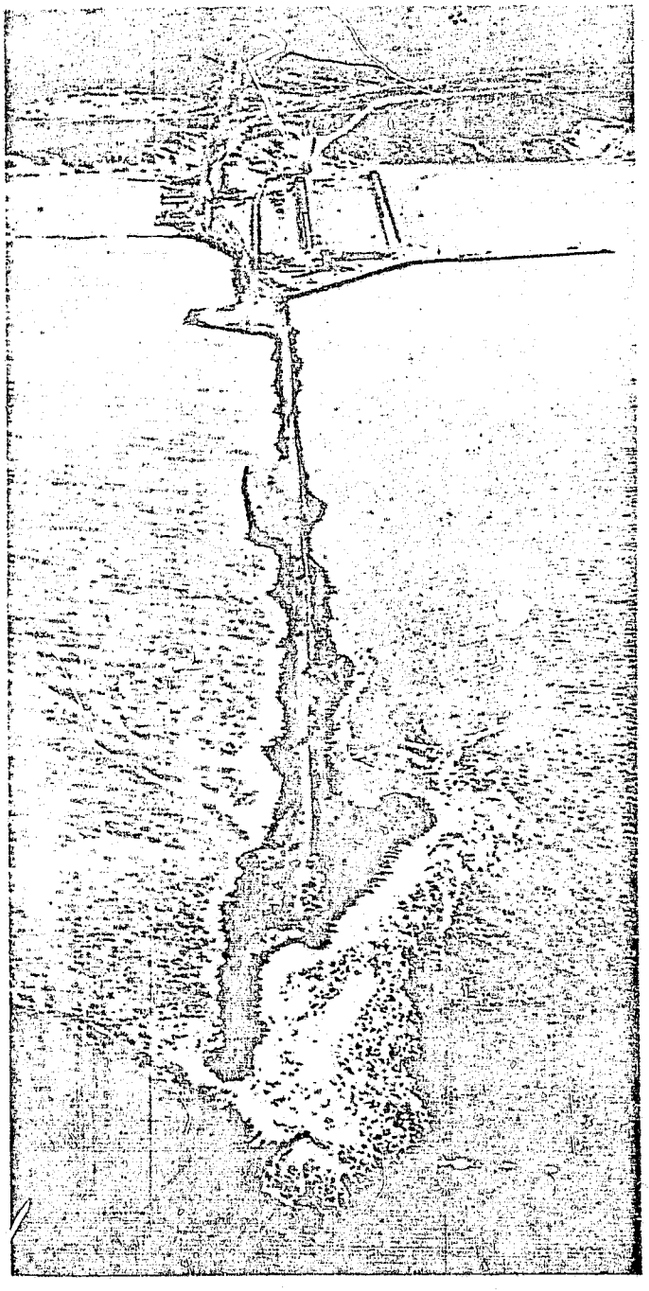
Personnel

During the past financial year, the salary and wage expenditure of the Corporation amounted to R192,5 million, as compared with R145,2 million the previous year. The labour strength at the end of the financial year was 24 600 Whites and 25 100 Non-Whites. Employees at Durnacol (coal mine), Uis (tin mine) and Rosh Pinah (zinc mine) and their earnings are not included in the above totals. The above increase of approximately R47 million in the salary and wage account is ascribed mainly to the following reasons:

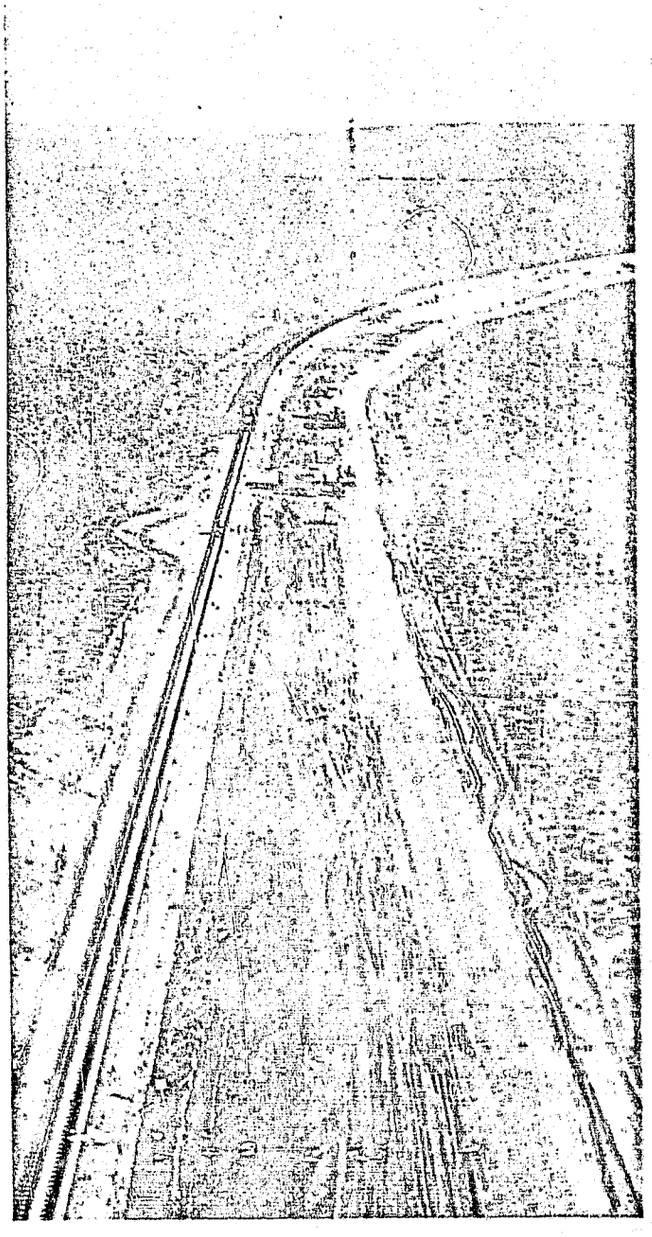
- An increase in labour force, on account of the extensions, by 2 900 Whites and 4 200 Non-Whites.
- Salary and wage increases which had to be granted in order to be able to compete on the labour market and also to compensate employees to some extent for the rising cost of living.

Owing to wage adjustments by the Chamber of Mines in the mining industry, the Corporation, in order to remain competitive in the Bantu labour market, had to grant similar wage adjustments to all Bantu miners during February

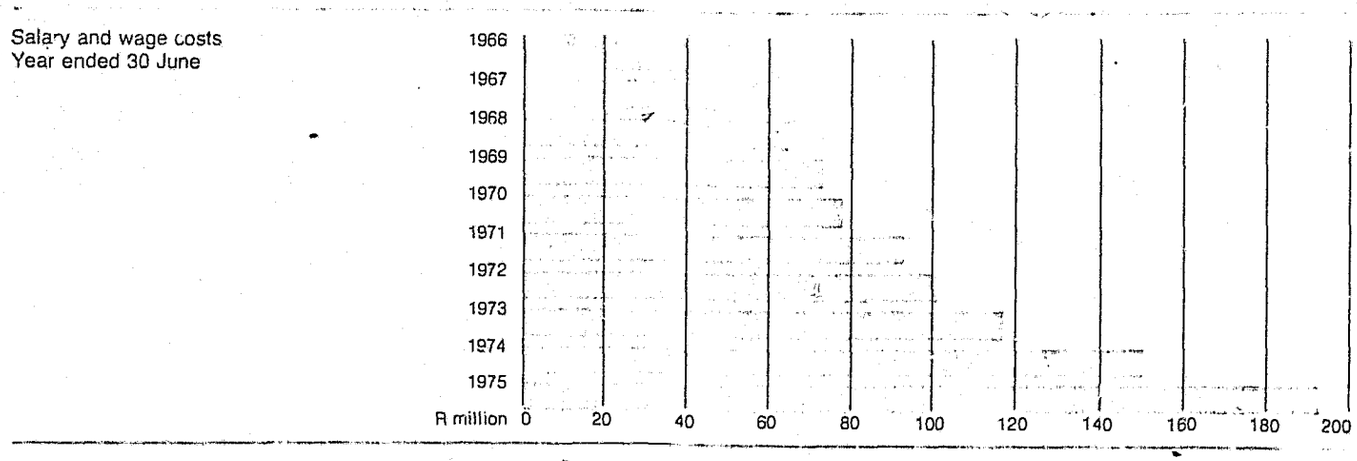




An aerial view of part of Saldanha Bay, showing the causeway under construction.



The railway line being built from Saldanha Bay over a distance of 861 km to the ore-loading station at Sishen.



1975. As a result of the increase in the cost of living, the Corporation was also obliged, as in the case of other metal and engineering industries, to grant salary adjustments to all employees as from 1 June 1975.

Iscor once again failed to reach the employment targets for the required manpower in the critical areas. This failure was the result of the Corporation's vast and continued expansions, on the one hand, and the growth of numerous other concerns in the Republic, on the other. In other words, a growing number of continually developing industries are pursuing a labour force which is growing much slower than the number of vacancies.

The sustained efforts made in respect of domestic recruitment, at least had the effect that the Corporation did not fall behind its competitors.

The results of the Corporation's overseas recruiting were beyond expectation – 984 employees (including 465 artisans, 385 production workers and 65 engineers) arrived during the twelve months up to 30 June 1975. These successes were due mainly to the unstable economic situation in the United Kingdom and Europe, and also the intensified recruiting drives conducted by Iscor.

Strong emphasis was laid during the year on selection and, in particular, on external and internal training as part of Iscor's efforts to improve productivity.

Bursary loans for engineers were increased from R900 to R1 000 a year. This year 266 students are availing themselves of the bursary loan scheme, of whom 95 are new bursary holders, while 17 bursary holders had completed their studies and took up employment this year.

During the past year the technical institutes for the external training of apprentices at Pretoria and Newcastle were completed and taken into service. These institutions will be transferred to the Department of National Education within the foreseeable future at their construction costs. A start has been made with building work on the comprehensive training complex at Sishen, and parts of the hostel will be occupied already at the end of 1975.

Members of the Corporation management are also being intensively trained on an on-the-job basis in the basic principles of supervisory procedures.

Large extensions lead to a strong demand for building stands in order to have rent units and property units available for employees. Experience has shown that it was more economical for the Corporation to lay out and develop townships itself, when hundreds of stands were required immediately or within a short period of time.

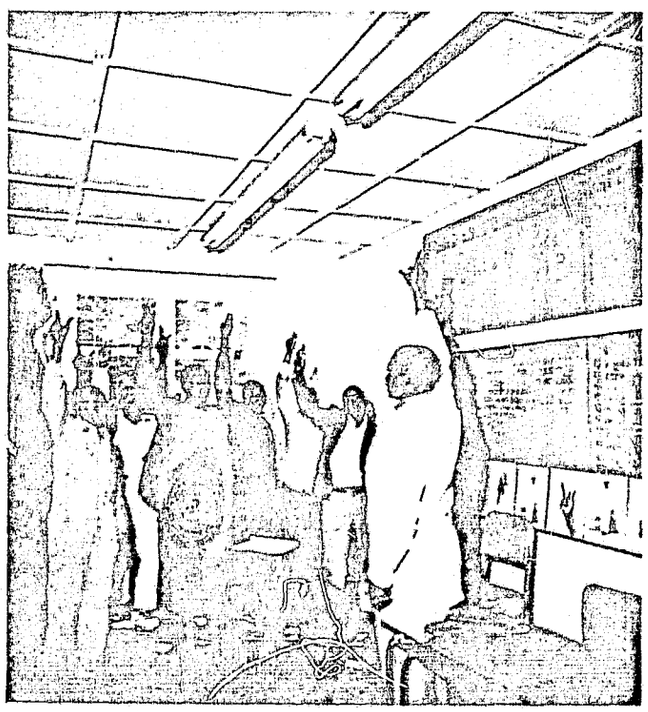
At Vredenburg an important break-through was made in that permission was obtained from the Department of Community Development to lay out a township in a Coloured area on land to which Iscor had obtained property rights, on condition that it would be made available exclusively for Coloured occupation

The Occupational Diseases in Mines and Works Act took effect on 1 October 1973. As from the same date the Iscor Works at Pretoria and Vanderbijlpark were declared controlled areas. The Newcastle South Works was declared a controlled area with effect from 1 September 1974. The levies paid monthly to the Compensation Commissioner for Occupational Diseases in terms of this Act, are determined by the number of risk posts at the centre concerned and the risk percentage determined for that centre by the risk committee

Controlled and associated companies

The affairs of public companies associated with Iscor are dealt with by their chairmen in their respective annual reports.

Iscor's interest in International Pipe and Steel Investments South Africa (Pty) Limited (Ipsa) is held through Metkor Investments Limited. The affairs of Ipsa, as far as they concern Iscor, are dealt with in the annual reports of Metkor and those public companies which are subsidiaries of Ipsa.



Formal training of a group of Bantu employees as slinger boys for crane operations.

During the year under review Amcor Limited disposed of its subsidiary companies to South African Manganese Limited in exchange for 5 700 000 ordinary shares and R7 000 000 worth of 10 per cent cumulative preference shares in that company.

Last year it was reported that Iscor had acquired the entire issued share capital of Van Thiel's Wire Industry (Pty) Limited which owned property at Mobeni in Natal and was required to establish temporary warehouse facilities in that area. The shares were disposed of, and the Corporation purchased a property at Prospecton for the same purpose. A company, Tornado Enterprises (Pty) Limited, owning property at Alrode in the Transvaal, was acquired during the year for the purpose of establishing warehouse facilities.

In conjunction with Koppers Company Inc. of the USA, Iskop (Pty) Limited was registered for the purpose of developing the production and sale of "black" products arising out of the coke oven operation at the Pretoria and Vanderbijlpark Works.

The other companies in which Iscor has a direct or indirect financial interest and whose operations supplement its main functions, are the following:

(i) Cape Town Iron and Steel Works (Pty) Limited (Cisco), for the production of reinforcing rod for sale to Iscor's customers in the Cape Town area.

(ii) Yskor Newcastle Grondbesit Beperk, on whose property the South Works at Newcastle is situated.

(iii) Minsa (Pty) Limited, Iscor Housing Utility Company, Iscor Estates (Pty) Limited and Vanderbijl Park Estate Company, for the provision of housing facilities for employees and for general property development.

(iv) The Durban Navigation Collieries (Pty) Limited, Industrial Minerals Mining Corporation (Pty) Limited and Imcor Zinc (Pty) Limited, for the provision of essential raw materials in the form of coking coal and base metals, and Ferrous Scrap Distributors (Pty) Limited, for scrap.

(v) Heckett (SA) (Pty) Limited, for the recovery of scrap; Iscor Utility Stores (Pty) Limited, Air Products (SA) (Pty) Limited, Vantin (Pty) Limited and Steel Sales Company of Africa (Pty) Limited, for the provision of employee services and as media for the sale and distribution of Iscor products; and Rhodesian Steel Sales Company (Pvt.) Limited which, through its wholly-owned subsidiary, Iscor (Rhodesia) Steel Sales Company (Pvt.) Limited, undertakes the sale of the Corporation's products in Rhodesia.
During the year under review the Corporation increased its shareholding in Vantin (Pty) Limited.

(vi) Metpro Developments (Pty) Limited, which concentrates basically on the manufacture of improved brake shoes for rail traffic and will supply shoes for the Sishen-Saldanha Bay railway.

(vii) Iscor-Iran Company Limited and Iskoor Steel Services Limited, established in conjunction with local interests in Iran and Israel, respectively, to promote the sale of the Corporation's products in those countries.

(viii) An overseas service company in London to assist with the administration of the Corporation's affairs in Europe

The Corporation also has representatives in London and New York and agents in the United States of America, South America, the United Kingdom, Italy and Mauritius.

Directorate and management

There was no change in the Corporation's directorate during the year, and I would like to express my appreciation for the help and guidance of my co-directors during a difficult period in the life of the Corporation. I also wish to thank the Managing Director, Mr. J.P. Coetzee, the General Manager, Mr. K.R. Rümelin, members of management and all other employees for their loyal service.

At the meeting I will move that the report of the directors and accounts, as submitted, be approved and adopted and that all things undertaken and performed on behalf of the Corporation, be confirmed.

Pretoria
22 October 1975

T. F. Muller
Chairman

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Report of the Directors

The directors have pleasure in presenting their report on the results and activities of the Corporation for the year ended 30 June 1975.

Financial results

Although the trading profit and other income showed a considerable improvement from R14 996 000 in 1974 to R51 991 000 this year, the Corporation suffered a loss for the year of R35 874 000 (1974 – R37 603 000) after taking into account the heavy burden of financing charges amounting to R87 865 000 (1974 – R52 599 000). Notwithstanding this loss, it should be noted that 'Distributable reserves' reflect a minimal decrease of R1 626 000 (1974 – R16 102 000) from R339 885 000 at 30 June 1974 to R338 259 000 at 30 June 1975, mainly due to the additional provision of R34 281 000 made during the year for the increased replacement cost of fixed assets.

Capital employed

By means of an amendment to the Iron and Steel Industry Act, 1928 the Corporation's prescribed share capital was increased during the year by an additional 228 000 000 B shares of R2 each from 125 000 000 to 353 000 000 B or preference shares of R2 each.

During the year a further 65 000 000 B shares were issued at par to the State President, which resulted in the total issued and fully paid capital increasing from R195 200 000 to R325 200 000.

The Corporation made further stock issues, entered into loan and revolving credit agreements and utilized suppliers credit during the year, which resulted in fixed period loans increasing by R470 876 000 to R1 285 700 000 (1974 – R814 824 000).

Fixed assets

The additional investment in fixed assets during this financial year amounted to R570 386 000 (1974 – R479 703 000).

The net book value of fixed assets at the year-end amounted to R1 638 132 000 (1974 – R1 118 610 000) which includes extensions under construction at 30 June 1975 of R550 999 000 (1974 – R381 001 000). 'Extensions under construction' includes expenditure of R247 504 000 (1974 – R69 152 000) for the Sishen-Saldanha scheme.

Interests in controlled and associated companies

The net increase of R47 778 000 in loans and advances is mainly attributable to further advances of approximately R34 million to the Corporation's housing and estate companies to meet expenditure on home ownership and housing schemes for employees. Advances to The Durban Navigation Collieries (Proprietary) Limited to finance capital extensions at the Durnacol Colliery accounted for a further R7,6 million.

Current assets and liabilities

The value of 'Stocks and work-in-progress' increased by R96 084 000 from R162 190 000 at 30 June 1974 to R258 274 000 at 30 June 1975.

Approximately 70% of this increase is attributable to a build-up in the stock of work-in-progress and finished products as well as a planned increase in consumable stores and plant spares to provide for the requirements of new plants being built under the vast extension schemes, particularly at Newcastle and Vanderbijlpark. The remainder can be attributed to higher production costs and escalations in the purchase prices of raw materials and stores stock.

The increase of R34 734 000 in 'Debtors' in comparison with the previous year is mainly due to increases in selling prices of products.

'Creditors' at 30 June 1975 reflects an increase of R62 616 000 as compared with the previous year. This is directly attributable to the extensive capital expenditure with the resultant build-up in retention monies, as well as increased purchase prices.

Directorate

There was no change in the Corporation's directorate during the year under review. The names of the directors holding office at 30 June 1975 and at the date of this report are set out on page 1.

Income Statement

for the year ended 30 June 1975

	Notes	1975 R000	1974 R000
Turnover		627 253	469 341
Profit from trading	2	49 239	12 885
Dividends received	3	2 455	2 111
Profit on sale of investment		297	–
		51 991	14 996
Financing charges	4	87 865	52 599
Loss for year		35 874	37 603

Balance Sheet

at 30 June 1975

	Notes	1975 R000	1975 R000	1974 R000	1974 R000
Source of capital employed					
Share capital	5		325 200		195 200
Distributable reserves	6		338 259		339 885
Shareholders' interest			663 459		535 085
Fixed period loans	7		1 285 700		814 824
			1 949 159		1 349 909
Employment of capital					
Fixed assets	8		1 638 132		1 118 610
Interests in controlled and associated companies	9		226 147		178 234
Loan portion of taxation			974		935
Current assets					
Stocks and work-in-progress	10	258 274		162 190	
Debtors		108 929		74 195	
Bankers and short-term deposits		368		279	
Steel import scheme	11	5 563	373 134	35 790	272 454
			2 238 387		1 570 233
Current liabilities					
Creditors		200 503		137 887	
Bankers and short-term loans		59 645		54 333	
Shareholders for dividends		16		16	
Iron and steel export scheme	12	3 325		4 296	
		263 489		196 532	
Provisions					
Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses, self-insurance and sundry contingencies		25 739	289 228	23 792	220 324
			1 949 159		1 349 909

Notes on the Financial Statements

1. Accounting policies

This summary of the principal accounting policies of the Corporation is presented to assist in the evaluation and appreciation of the annual financial statements in which these policies have in all material respects been followed.

1.1 Constitution

The Corporation is constituted in terms of the Iron and Steel Industry Act, 1928 (as amended). This act stipulates that the Companies Act, 1973 or any amendment thereof does not apply to the Corporation.

1.2 Turnover

Turnover represents the invoiced sales value (excluding any import or export levies) of all products sold on the local and export markets.

1.3 Depreciation

Depreciation of fixed assets used in production is calculated on a straight line basis at a rate determined by the expected life of each individual type of asset. Should a particular asset continue in use after completion of its anticipated life, depreciation continues to be raised at the same rate. Conversely, where an asset is retired before the expiry of its anticipated life, depreciation ceases to be raised. The original cost of the redundant or obsolete asset is written off against accumulated depreciation and not against income. The proceeds from sales of fixed assets are credited to accumulated depreciation. No depreciation is provided on properties, leases and rights.

1.4 Increased replacement cost of fixed assets

In addition to depreciation, a charge based on the current wholesale price index is made to production costs to provide for the estimated increased replacement cost arising in a particular year of operation.

1.5 Provisions

Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses and self-insurance are provided for by charges to production costs. When expenditure in respect thereof is incurred, such expenditure is charged against these provisions.

1.6 Pre-production expenditure – new mining development

As a result of the extensive expenditure on new mining development at Sishen North Mine and Grootegeluk and in keeping with recognised mine accounting practice, pre-production financing charges have been capitalized with effect from 1 July 1974 (see note 4). Pre-production expenditure thus now consists of waste stripping costs, direct administrative project costs as well as financing charges which will be written-off over the life of the mine or 20 years whichever is the lesser period.

1.7 Financing charges

Financing charges represent the net cost of financing the capital extension projects and current operations and consist mainly of interest paid on fixed period loans, reduced by interest received as well as financing charges on new mining development and the Sishen-Saldanha scheme.

The interest rate used to calculate the financing charges capitalized in respect of the pre-production expenditure on new mining operations and the allocation to the Sishen-Saldanha scheme is based on the Corporation's average borrowing rate for the year under review.

Financing charges include the cost of acquiring loans, differences resulting from foreign currency conversions, costs and commissions arising from forward exchange purchase contracts, discounts on the issue price of bonds, management fees and other expenses incurred on receipt or renewal of loans, and are charged when incurred.

1.8 Site preparation

During the current year expenditure amounting to R11 097 000 (1974 – R7 525 000) in respect of site preparation for extensions was capitalized and, together with similar expenditure capitalized in previous years, is shown under a separate asset head – 'Site preparation'. The intention is to write this expenditure off against future profits over a limited period.

1.9 Steel used on capital extensions

No adjustment is made for profit arising on steel manufactured by the Corporation, sold at arm's length to the trade and subsequently used by contractors on the Corporation's capital extensions.

1.10 Foreign currency conversions

Loans and suppliers credit repayable in foreign currencies and secured by forward exchange purchase contracts are converted into South African currency at the fixed rates of exchange applicable to the respective forward exchange purchase contracts.

Loans and suppliers credit repayable in foreign currencies and not secured by forward exchange purchase contracts are converted into South African currency at rates of exchange ruling at balance sheet date.

Current assets and current liabilities in foreign currencies are converted into South African currency at rates of exchange ruling at balance sheet date.

1.11 Stocks and work-in-progress

Finished products and work-in-progress are valued at current standard costs including labour, materials, manufacturing and direct overhead costs.

Raw materials and consumable stores are valued at current purchase prices.

Plant spares are valued at current purchase price less provision for obsolescence and depreciation.

Rolls and moulds are valued at cost less a charge for usage and obsolescence.

Appropriate provision has been made where the above stock values are considered to exceed net realisable values.

The bases of valuation of stocks and work-in-progress are consistent with those of prior years and the aggregate book value is below cost.

1.12 Deferred and current taxation

Based on present forecasts and current tax legislation, the Corporation will not be liable for taxation in the foreseeable future. Accordingly no provision is made for taxation deferred by reason of accelerated allowances on fixed assets nor has provision been made for current taxation.

	1975 R000	1974 R000
2. Profit from trading	49 239	12 885
– after charging		
Depreciation of fixed assets	50 864	35 745
Increased replacement cost of fixed assets	34 281	21 626
Furnace reconditioning and renewal of short-life assets	9 903	13 087
Extraordinary operating expenses provision	5 952	5 624
Self-insurance provision	1 435	1 000
3. Dividends received		
Listed shares	1 757	1 498
Unlisted shares	698	613
	2 455	2 111
4. Financing charges		
Gross financing charges	118 747	63 937
Less –		
Interest from controlled and associated companies	6 601	4 530
Other interest received	6 019	4 053
Allocation to Sishen-Saldanha scheme (see note 8(iii))	14 664	2 755
Financing charges capitalized – new mines (see note 1.6)	3 598	–
Net financing charges	87 865	52 599

	1975 R000	1974 R000
5. Share capital		
Prescribed by Iron and Steel Industry Act, 1928 (as amended)		
500 000 A shares of R2 each	1 000	1 000
353 000 000 B or preference shares of R2 each	706 000	250 000
	707 000	251 000
Authorized, issued and fully paid		
500 000 A shares of R2 each	1 000	1 000
161 880 364 B shares of R2 each	323 761	193 761
219 636 7½% cumulative preference shares of R2 each	439	439
	325 200	195 200
The unissued 'B' or preference shares may be issued by the Board at not less than par and under such conditions as the State President may approve, provided that present holders of 'B' shares shall have the first right to subscribe for such additional shares.		
6. Distributable reserves		
(1) Reserve for increased replacement cost of fixed assets		
Balance at beginning of year	181 824	160 198
Charged to production costs	34 281	21 626
Balance at end of year	216 105	181 824
(2) General reserve	194 000	194 000
(3) Accumulated loss		
Balance at beginning of year	(35 906)	1 789
Under-provision for taxation	–	(92)
	(35 906)	1 697
Loss for year	(35 874)	(37 603)
Accumulated loss at end of year	(71 780)	(35 906)
Total distributable reserves before dividend	338 325	339 918
Dividend on 7½% cumulative preference shares – 1974	(33)	(33)
Dividend on 7½% cumulative preference shares – 1975	(33)	–
Total distributable reserves	338 259	339 885
7. Fixed period loans	1 285 700	814 824
Loans repayable in foreign currencies which are not secured by forward exchange purchase contracts amount to R67 206 000 (1974 – R46 955 000). Of this amount R40 458 000 (1974 – R26 585 000) is payable in United States dollars and R26 748 000 (1974 – R20 236 000) in British Sterling.		

	1975 R000	1974 R000
8. Fixed assets		
Properties, leases and rights	37 698	14 396
Buildings and works	473 488	323 794
Machinery, plant and furnaces	900 074	691 633
Site preparation	32 492	21 395
Total cost	1 443 752	1 051 218
Depreciation	356 619	313 609
	1 087 133	737 609
Extensions under construction – at cost	550 999	381 001
Net book value	1 638 132	1 118 610
Depreciation at beginning of year	313 609	282 516
Charged to production costs	50 864	35 745
	364 473	318 261
Redundant or obsolete assets written off	7 854	4 652
Depreciation at end of year	356 619	313 609

(i) Fixed assets amounting to R5 591 000 (1974 – R3 641 000) have been erected on property of companies wholly-owned by the Corporation.

(ii) An amount of R3 530 000 (1974 – R3 329 000) included under 'Buildings and works' is in respect of a hostel for Bantu employees of the Corporation which has been erected on leasehold property in the South African Bantu Trust area. This amount represents the cost of the hostel buildings erected in terms of the leasehold agreement.

(iii) 'Extensions under construction' includes expenditure of R247 504 000 (1974 – R69 152 000) on the Sishen-Saldanha scheme. This expenditure includes an allocation of financing charges amounting to R17 419 000 (1974 – R2 755 000). The scheme is being undertaken and financed by the Corporation as authorized in terms of Acts 28 and 29 of 1973.

9. Interests in controlled and associated companies		
Listed shares – at cost (market value 30 June 1975 – R22 972 000; 1974 – R22 541 000)	24 389	24 389
Unlisted shares – at cost	55 488	55 353
Loans and advances		
Due to Corporation	154 554	106 932
Due by Corporation	(8 284)	(8 440)
	226 147	178 234
10. Stocks and work-in-progress less provisions – in the aggregate below cost		
Finished products	22 181	14 348
Work-in-progress	80 133	56 122
Raw materials	25 219	14 126
Plant spares	52 475	29 223
Consumable stores	52 220	32 127
Rolls and moulds	26 040	16 244
	258 274	162 190

	1975 R000	1974 R000
11. Steel import scheme		
The steel import scheme is administered by the Corporation on behalf of the Department of Industries. The long-term financing of the scheme is being provided by the Government, however the short-term bridging finance is provided by the Corporation. The details are as follows:		
Cost of imported steel in excess of the local cost plus interest, not yet recovered from levies imposed under the scheme	245 500	86 113
Finance provided by the Government	239 937	50 323
	5 563	35 790
12. Iron and steel export scheme	3 325	4 296
This balance represents the excess of local steel producers levy over claims to date under the export promotion scheme administered on behalf of the Department of Industries.		
13. Contingent liabilities		
The Corporation has –		
(i) guaranteed the principal sum and interest on loans to its housing and estate companies	25 750	31 000
(ii) indemnified Iscor Pension Fund against any loss arising out of loans made to Yskor Landgoed (Eiendoms) Beperk		
(iii) guaranteed a loan of US$3 500 000 from a bank in the United States to Iskop (Proprietary) Limited, a company in which the Corporation has a 50% interest. The amount drawn at 30 June 1975	594	–
It is not anticipated that the Corporation will be called upon to fulfil any of the above obligations.		
14. Capital commitments		
(i) Contracts entered into for		
– Extensions	341 000	451 000
– Sishen-Saldanha scheme	100 000	146 000
(ii) Authorised expenditure for which there are no negotiated contracts		
– Extensions	110 000	100 000
– Sishen-Saldanha scheme	110 000	124 000
Capital expenditure will be financed from share issues, loans and funds generated by the Corporation from normal operations.		
15. Comparative figures		
Certain figures relating to 1974 have been restated in order to reflect appropriate comparisons with those of 1975.		

Statement of source and application of funds

for the year ended 30 June 1975

	R000
Source of funds	
Profit before financing charges	51 991
Depreciation	50 864
Provision for increased replacement cost of fixed assets	34 281
Funds from normal operations	137 136
Increase in share capital	130 000
Increase in fixed period loans	470 876
	738 012
Application of funds	
Acquisition of fixed assets	570 386
Increase in interests in controlled and associated companies	47 913
Increase in loan portion of taxation	39
Financing charges	87 865
Dividend on 7½% cumulative preference shares	33
Increase in working capital	31 776
	738 012

Ten-year S[illegible] 1975 (Year [illegible] 30 June)

Description	1975	1974	1973	
Raw materials consumed (tons):				
Iron ore (including fine ore for sintering)	6 228 700	[illegible]68 200	5 593 000	5 [illegible]
Coking coal	4 684 100	3 980 700	3 840 800	3 [illegible]
Other coal	460 900	478 000	471 000	[illegible]
Dolomite (raw)	1 041 600	1 036 400	1 002 200	1 [illegible]
Production (tons):				
Ingot steel	4 349 700	4 036 500	4 052 700	3 [illegible]
Continuously cast blooms	306 200	20 200	—	
Sales (tons):				
Prime steel products*	3 346 300	3 [illegible] 500	2 968 200	2 [illegible]
Pig iron	413 300	684 700	827 700	[illegible]
Coke oven by-products	188 700	140 800	145 100	[illegible]
Operating results:	R	R	R	
Net sales revenue	601 860 000	444 840 000	372 819 000	304 0[illegible]
(Loss)/net profit before tax	(35 874 000)	(37 603 000)	3 954 000	9 5[illegible]
Taxation:	—	—	—	[illegible]
Financial:				
Source of capital employed:				
Share capital	325 200 000	195 200 000	165 200 000	145 2[illegible]
Distributable reserves	338 259 000	339 885 000	355 987 000	341 2[illegible]
Fixed-period loans	1 285 700 000	814 824 000	439 693 000	175 1[illegible]
Current liabilities and provisions	289 228 000	220 324 000	108 905 000	100 7[illegible]
	2 238 387 000	1 570 233 000	1 069 785 000	762 3[illegible]
Employment of capital:				
Fixed assets				
In operation – at cost less depreciation	1 087 133 000	737 609 000	363 075 000	332 6[illegible]
Under construction – at cost	550 999 000	381 001 000	311 577 000	87 2[illegible]
Investments	227 121 000	179 169 000	149 623 000	142 1[illegible]
Current assets	373 134 000	272 454 000	245 510 000	200 3[illegible]
	2 238 387 000	1 570 233 000	1 069 785 000	762 3[illegible]

*Excluding off-cuts and scrap.

[illegible] slab hot-scarfing machine at the [illegible] mill, Vanderbijlpark Works.

1973	1972	1971	1970	1969	1968	1967	1966
593 000	5 568 800	4 905 800	4 073 300	4 231 100	4 086 400	4 021 500	3 932 200
840 800	3 806 800	3 644 400	3 173 800	3 162 100	3 141 900	3 099 200	2 945 100
471 000	424 600	444 600	433 700	407 900	460 900	480 400	449 400
002 200	1 006 700	886 300	631 700	584 800	636 200	598 900	650 600
052 700	3 816 300	3 478 400	3 384 900	3 350 400	3 194 600	2 858 400	2 592 000
—	—	—	—	—	—	—	—
968 200	2 659 000	2 638 200	2 676 400	2 483 600	2 249 100	2 114 900	1 802 500
827 700	846 900	650 200	100	144 200	152 700	299 100	259 200
145 100	144 500	154 500	158 500	147 300	151 500	130 300	133 800
R	R	R	R	R	R	R	R
819 000	304 067 000	291 470 000	238 480 000	219 862 000	199 382 000	186 851 000	159 786 000
954 000	9 538 000	19 520 000	15 040 000	19 074 000	16 218 000	22 727 000	19 739 000
—	619 000	4 946 000	5 781 000	9 933 000	6 854 000	8 904 000	3 218 000
200 000	145 200 000	125 200 000	95 200 000	85 200 000	85 200 000	70 200 000	70 200 000
987 000	341 252 000	330 644 000	316 130 000	305 276 000	296 573 000	286 732 000	271 944 000
693 000	175 134 000	138 583 000	65 615 000	32 839 000	18 000 000	—	—
905 000	100 793 000	72 827 000	85 693 000	53 402 000	50 336 000	57 760 000	40 246 000
785 000	762 379 000	667 254 000	562 638 000	476 717 000	450 109 000	414 692 000	382 390 000
075 000	332 662 000	308 799 000	288 060 000	231 862 000	235 791 000	204 396 000	181 546 000
577 000	87 214 000	37 140 000	28 970 000	31 630 000	12 478 000	31 347 000	34 413 000
623 000	142 172 000	131 774 000	127 126 000	79 553 000	64 733 000	57 080 000	59 626 000
510 000	20 331 000	189 541 000	118 482 000	133 672 000	137 107 000	121 869 000	106 805 000
785 000	762 379 000	667 254 000	562 638 000	476 717 000	450 109 000	414 692 000	382 390 000

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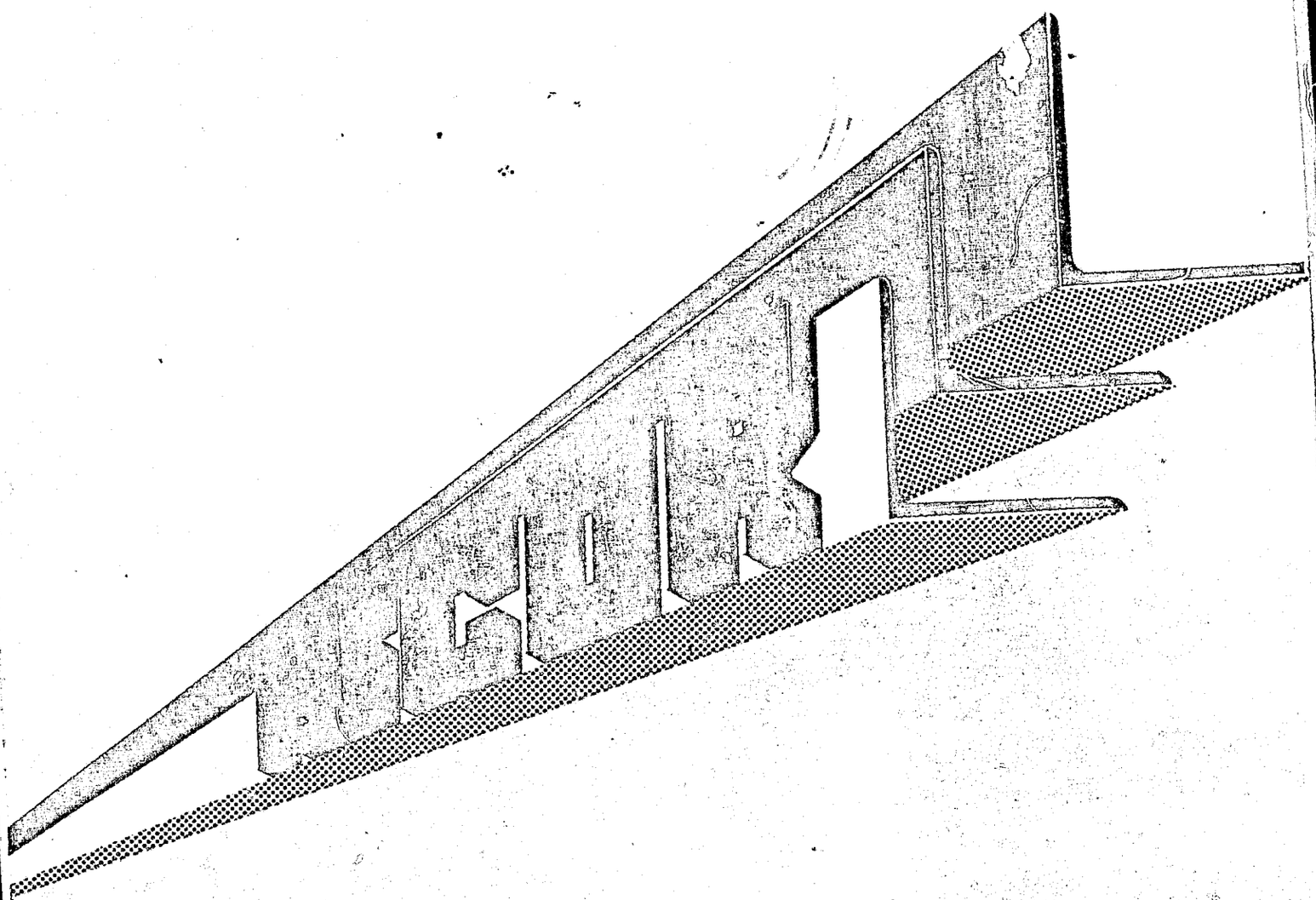
annual report 1976

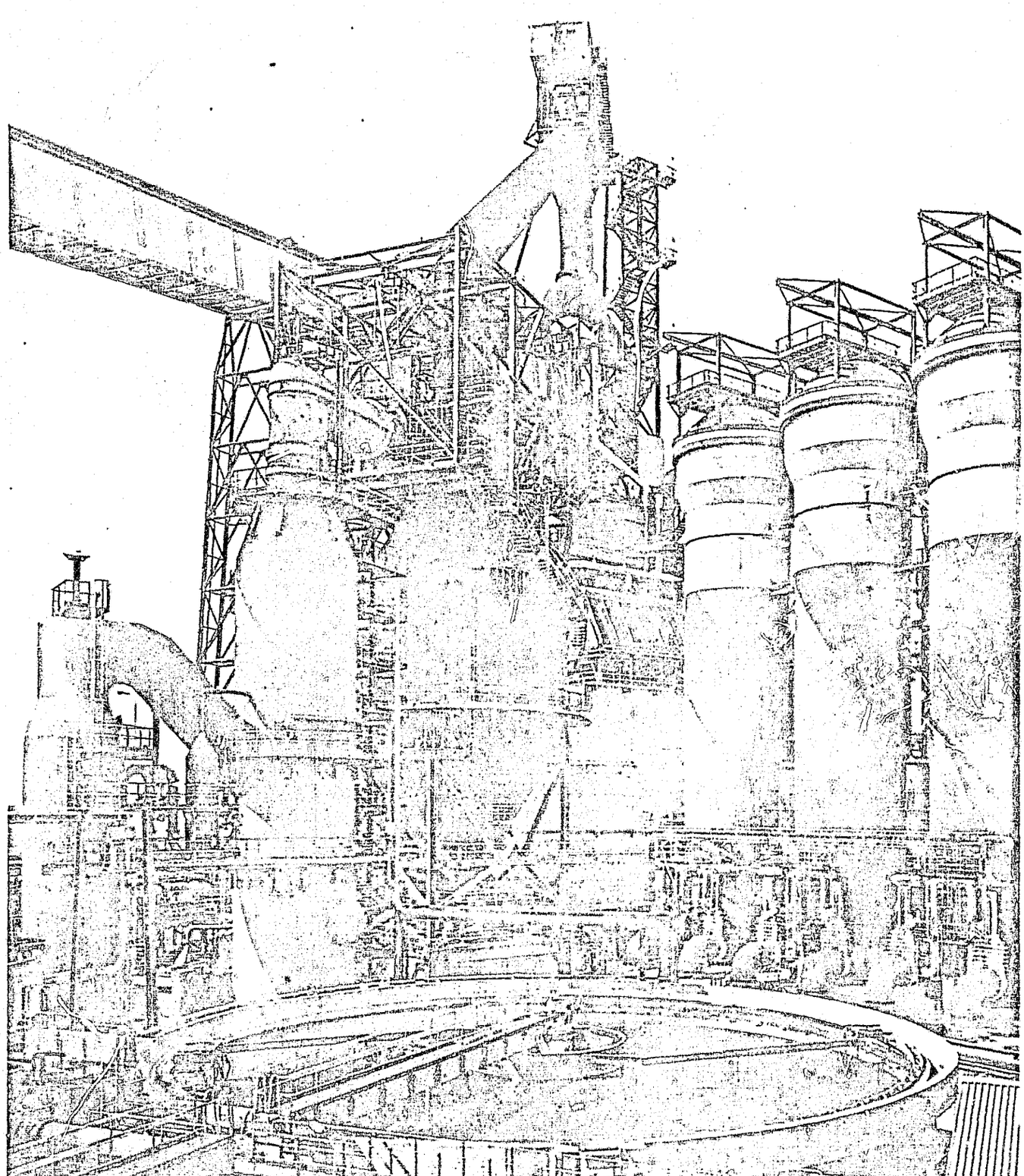


South African Iron and Steel Industrial Corporation, Limited

(Constituted and incorporated by Act of Parliament in the Republic of South Africa)

Board of Directors	Dr. T. F. Muller, Chairman Mr. J. P. Coetzee (Managing) The Hon. J. F. W. Haak (Resigned 10 September 1976) Mr. P. K. Hoogendyk Dr. J. P. Kearney Mr. J. J. Kitshoff Dr. M. D. Marais Prof. H. J. Samuels Mr. J. J. Vermooten
Management	Mr. J. P. Coetzee, Managing Director Mr. K. R. Rümelin, General Manager Mr. L. Duncker, Divisional General Manager (Mining and Supplies) Mr. H. C. H. Hutten, Divisional General Manager (External Interests) Mr. P. A. Olivier, Divisional General Manager (Domestic Marketing) Mr. P. J. C. Pretorius, Divisional General Manager (International Marketing) Mr. L. van Zyl, Divisional General Manager (Finance and Business Services) Mr. P. N. Basson, Deputy Divisional General Manager (Production) Mr. J. P. de Vos, Deputy Divisional General Manager (New Development) Mr. K. Prince, Deputy Divisional General Manager (Planning) Mr. G. J. Botha, General Project Manager, Sishen-Saldanha Project Mr. L. C. J. de Villiers, Corporate Manager (Personnel) Adv. A. C. Greyling, Group Secretary Mr. H. C. Jerling, Public Relations Manager Mr. F. P. Kotzee, General Works Manager, Newcastle Works Mr. D. W. Lamont, General Works Manager, Vanderbijlpark Works Dr. F. E. Malherbe, Research and Process Development Manager Mr. S. F. Marais, Marketing Manager Mr. I. J. Murray, Industrial Engineering Manager Mr. J. G. Riddell, General Works Manager (Designate), Vanderbijlpark Works Mr. P. J. Roux, Manager, International Marketing (Raw Materials) Mr. A. D. Schoeman, Materials Manager Mr. W. van Wyk, General Works Manager, Pretoria Works

(Hierdie verslag is ook in Afrikaans beskikbaar)



No. 5 blast furnace at the Newcastle Works. Recently completed, it has a capacity of 3 000 tons per day.

Notices of Meetings

Annual General Meeting of Private Shareholders

Notice is hereby given that the annual general meeting of private shareholders (holders of B shares or preference shares) of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, on Wednesday, 24 November 1976, at 09h00 for the following business:

1. To nominate an auditor in accordance with Section 14(1) of Act No. 11 of 1928, as amended.
2. To elect one director in terms of Section 3(1)(b) of Act No. 11 of 1928, as amended.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

Iscor Headquarters
P.O. Box 450
Pretoria 0001
5 October 1976

By order of the Board
A. C. Greyling
Group Secretary

Forty-Seventh Annual General Meeting

Notice is hereby given that immediately after the annual general meeting of private shareholders convened for 09h00 on Wednesday, 24 November 1976, the annual general meeting of shareholders of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, for the following business:

1. To receive the balance sheet and report of the directors for the year ended 30 June 1976.
2. To transact such other business as may be transacted at an annual general meeting of shareholders of the Corporation.

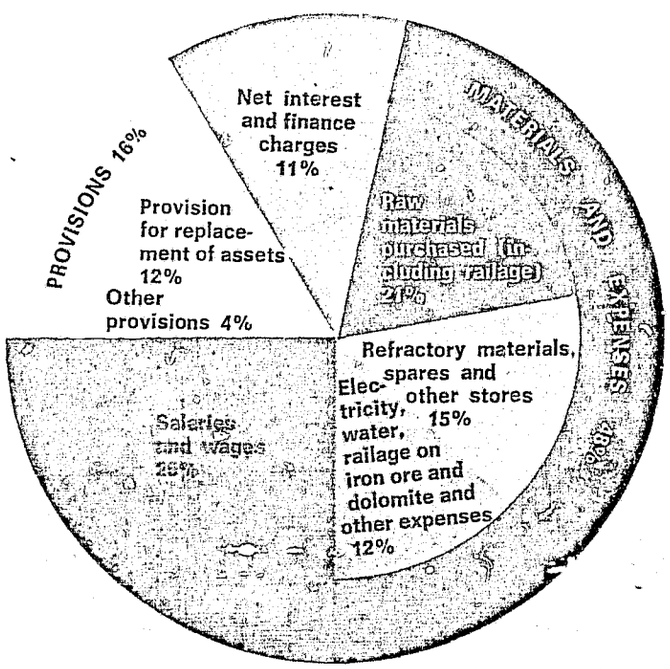
Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

Iscor Headquarters
P.O. Box 450
Pretoria 0001
5 October 1976

By order of the Board
A. C. Greyling
Group Secretary

At a Glance

(Figures rounded off to nearest thousand)	1976	1975
Steel production	5 176 000 tons	4 656 000 tons
Prime steel products sold	3 588 000 tons	3 346 000 tons
Net sales revenue (all products)	R 766 456 000	R 601 860 000
Gross trading profit	R 100 837 000	R 83 520 000
Reserve for increased replacement cost of fixed assets	49 495 000	34 281 000
Net trading profit	51 342 000	49 239 000
Other income/provision (net)	6 258 000	2 752 000
	57 600 000	51 991 000
Financing charges	87 657 000	87 865 000
Net loss for year	R 30 057 000	R 35 874 000
Capital expenditure — during year	R 637 910 000	R 570 386 000
Fixed assets (net value) — at year-end		
— in production	R1 303 888 000	R1 085 971 000
— under construction	905 049 000	552 161 000
	R2 208 937 000	R1 638 132 000
Funding		
— fixed-period loans	R1 868 706 000	R1 285 700 000
— share capital	515 200 000	325 200 000
	R2 383 906 000	R1 610 900 000


Net interest and finance charges 11%
PROVISIONS 16%
Provision for replacement of assets 12%
Other provisions 4%
MATERIALS AND EXPENSES
Raw materials purchased (including railage) 21%
Refractory materials, spares and other stores 15%
Electricity, water, railage on iron ore and dolomite and other expenses 12%
Salaries and wages 25%

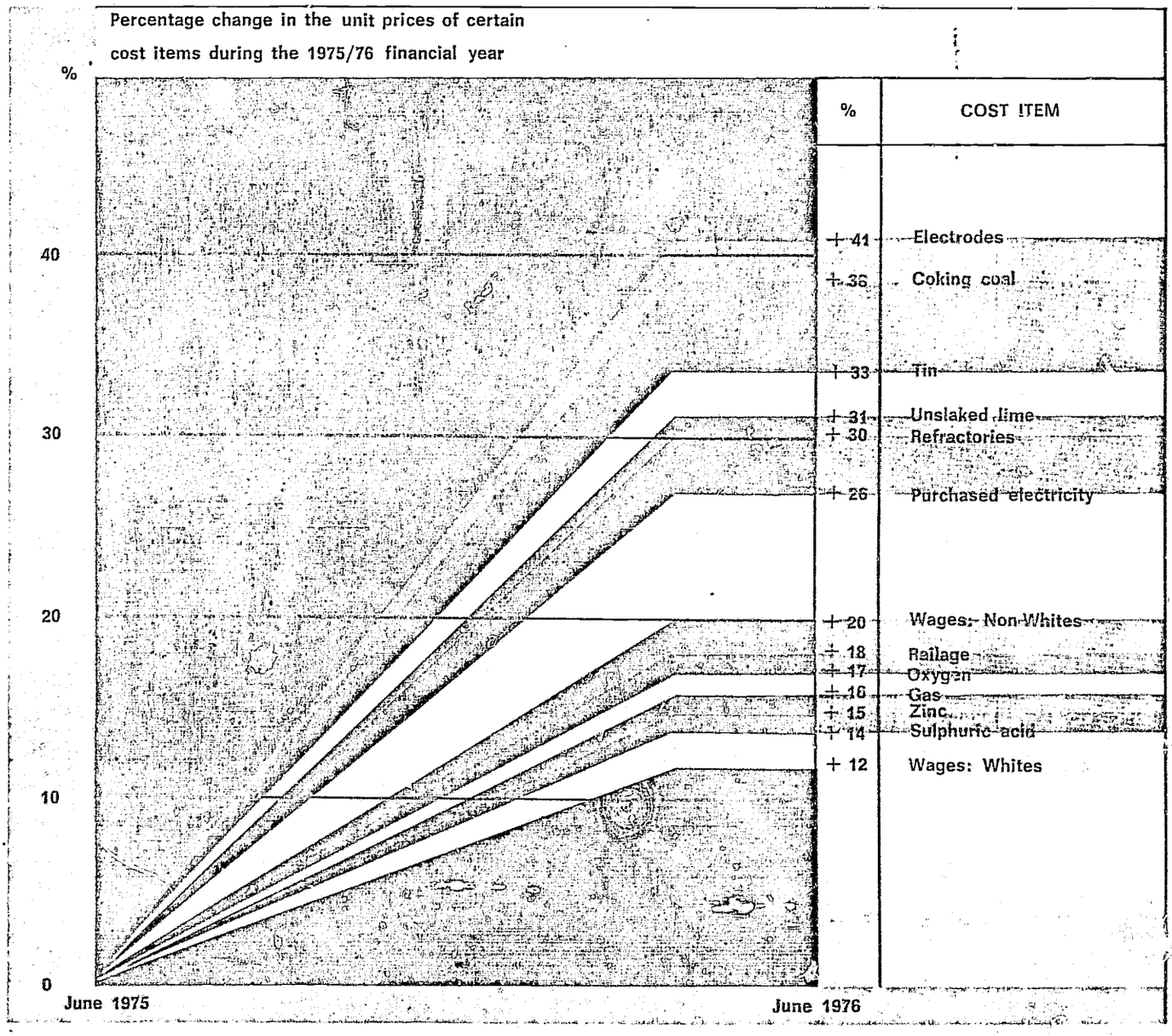
Statement by the Chairman

TO THE SHAREHOLDERS

OPERATING RESULTS

The year under review was again characterized by sustained development and extensions at the works and mines These extensions must be seen against the background of the large-scale importation of steel during the preceding few years, when the South African steel industry was incapable of meeting the extraordinarily high local demand.

The magnitude of the Corporation's development programme is evident from the fact that an amount of R638 million was applied during the financial year for the acquisition of fixed assets. However, the value of extensions under construction, which includes an amount of R455 million in respect of the Sishen-Saldanha Bay project, increased during the year by R353 million to R905 million. At this stage of the expansion programme, the cost of the extensions under construction is out of all proportion to the depreciated value of Iscor's fixed assets in operation, which at the end of the financial year amounted to R1 304 million. A further illustration of the magnitude of this programme is the fact the depreciated value of fixed assets in operation almost quadrupled over the past three years from R363 million at 30 June 1973 to the above amount of R1 304 million.



The full benefit of the increased production capacity arising from the expansion programme is not yet reflected in the operating results. It takes a number of years before all running-in problems have been eliminated, training programmes completed and normal production volumes attained. The comprehensive extensions are also having a disruptive effect on current production. Large-scale under-utilization of capacity is being experienced as a result of temporary bottlenecks and disequilibriums which are bound to occur because major production units have not yet been fully integrated. Steel production during the year has also been adversely affected by the poor quality and irregular supply of coking coal, which is of vital importance to the production process.

Iscor nevertheless increased its turnover during the year by 27 per cent to R799 million. Gross trading profit, before reserve for increased replacement cost of fixed assets, rose from R83,5 million to R100,8 million. This is an increase of 21 per cent, which compares reasonably well with the rise of 27 per cent in turnover. The uncapitalized portion of financing charges once again, as in the 1974/75 financial year, amounted to R88 million, whilst depreciation for the year increased by R16 million to R67 million.

In addition, the ever-increasing costs cancelled out the benefits of productivity improvement. Admittedly, steel price increases are granted from time to time to counter rises in costs, but it has been found over the past number of years that the latter rises, over which the Corporation has no control, continued to take place more rapidly than was expected and consequently wiped out the benefit of steel price increases The benefit of the price increase granted in June 1975, was cancelled out even before the end of that calendar year. The next price increase, of 15 per cent, became effective only on 7 May 1976, so that its effect on the results of the 1975/76 financial year has been relatively small.

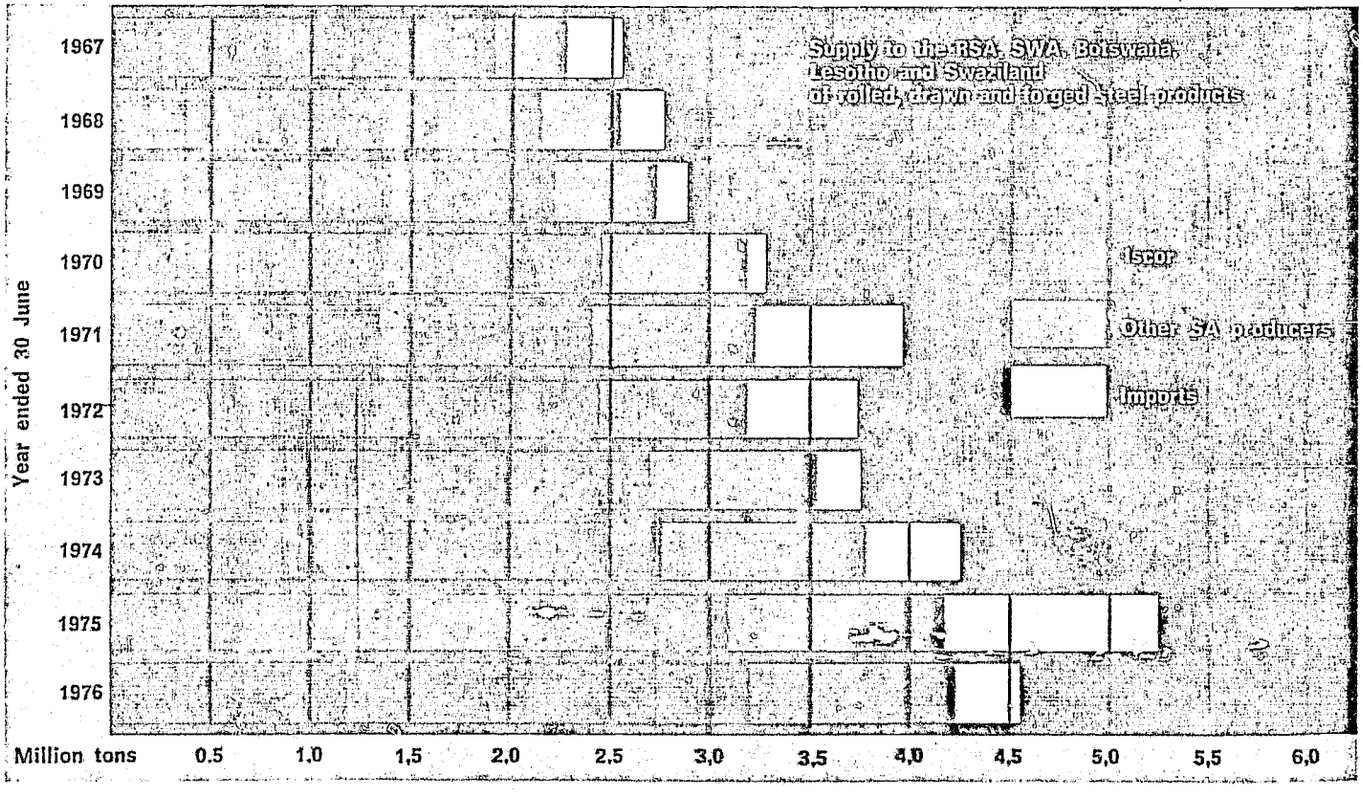
As a result of the recession in the local market, Iscor was obliged to sell 282 100 tons of steel products, or about 8 per cent of the total tonnage sold, on the overseas market during the year at prices which were lower than domestic prices.

All these factors contributed towards restricting the improvement on the net loss of R35 million experienced during the 1974/75 financial year to a mere R5 million. In the year under review, a net loss of R30 million was shown, after provision had been made for writing off an investment of R1,6 million.

FINANCING

The abnormally high increase in fixed and other assets, together with financing charges, resulted in the financing requirement for the year under review amounting to R947 million. Of the total requirement, R174 million could be financed from internal cash flow, before financing charges, and R190 million from additional share capital contributions by the Government. For the balance, Iscor had to rely on loan financing, which consequently rose by R583 million. In the two preceding years, loans increased by R471 million and R375 million, respectively, and the total amount of loans outstanding at the end of the financial year amounted to R1 869 million.

The sustained extensive loan raising programme, particularly during the past three years, has been most successful, but it is obvious that as far as financing is



concerned, Iscor cannot continue with its expansion programme at this rate, since its financing structure is adversely affected and its loan ratio is becoming too high. Although internal cash flow will increase considerably over the next few years, mainly on account of the provision for depreciation and the reserve for increased replacement cost of fixed assets, it is nevertheless clear that extensions cannot be financed indefinitely with loan capital and that the expansion programme will have to be delayed or even drastically curtailed to match the cash flow. Active steps are at present being taken to achieve this. Extensions of this nature are carried out over a long period, and when curtailments are decided upon, contractual obligations already entered into, cannot be called off.

The Corporation is still pursuing the conservative policy of providing in production costs for the ultimate higher replacement cost of fixed assets. During the year a further R49 million was reserved for this purpose, so that, despite the net loss of R30 million for the year, "Distributable reserves" actually rose by R19 million. However, this provision, together with other items of internal cash flow and taking financing charges into account, satisfied in total only 10 per cent of the net funds requirement. It is imperative, therefore, that a larger proportion of the extensions programme be financed out of own sources. The Franzsen Commission recommended that public corporations should finance not less than 40 per cent of their capital requirements out of current revenue (Third Report, paragraph 495). To achieve this ideal state of affairs, further price increases would be unavoidable.

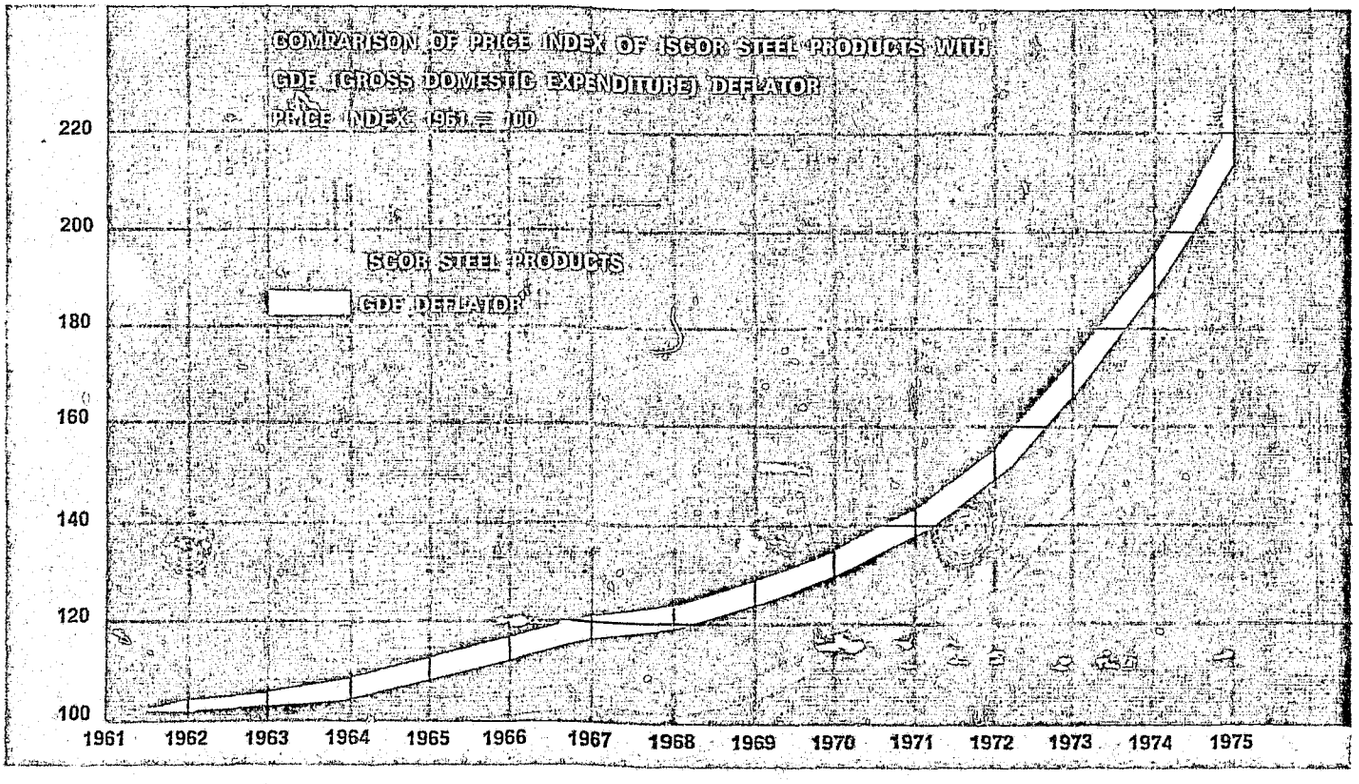
The latest steel price increase was not intended to make a contribution towards financing but only to make up to some extent for the rise in production costs, brought about by the spiralling rate of inflation. When the extent of the price increase was determined, no account was even taken of the financing charges of R88 million which were incurred during the year as a result of the abnormally high loan financing.

The present unhealthy financing structure may to a reasonable extent also be remedied by means of larger increases in issued share capital, which would place the ratio of shareholders' interest to loan funds on a sounder basis.

In order to make provision for future increases in issued fully paid share capital, the prescribed share capital was increased during the 1976 session of Parliament by statutory amendment from R707 million to R1 001 million by the creation of a further 147 million B or preference shares of R2 each.

Pricing policy

As already indicated, Iscor's internal cash flow, in relation to its financing requirements, is inadequate. This state of affairs may be ascribed in part to the price policy pursued by the Government in the past to maintain price levels as low as possible for as long as possible. This policy did help to combat general inflation, but it also meant that steel prices in the Republic were on a lower level than those in other countries and rose much more slowly over long periods than prices in foreign countries. Furthermore, the South African steel prices failed to keep pace with the general increase in other prices in the Republic, as measured by the GDE (Gross Domestic Expenditure) deflator. This shows that Iscor has been exposed to greater cost



pressures than it could equalize by means of allowed price adjustments. Therefore, to maintain certain profit margins, the Corporation had to absorb this full difference by means of productivity improvements which, of course, was not always possible.

If, for example, Iscor had been granted price adjustments since 1961 — the year in which the first price increase was requested since 1952 — which were in accordance with the trend of the GDE deflator, as well as an adjustment for the price leeway which already prevailed in 1961, the present value of this "lost" revenue would have amounted to a vast sum. Such additional revenue would have placed the Corporation in a position where it would have been much less reliant on loans — compare the R1 869 million outstanding at the end of the financial year. It would also have helped to advance the expansion programme and thus to spread it over a longer period.

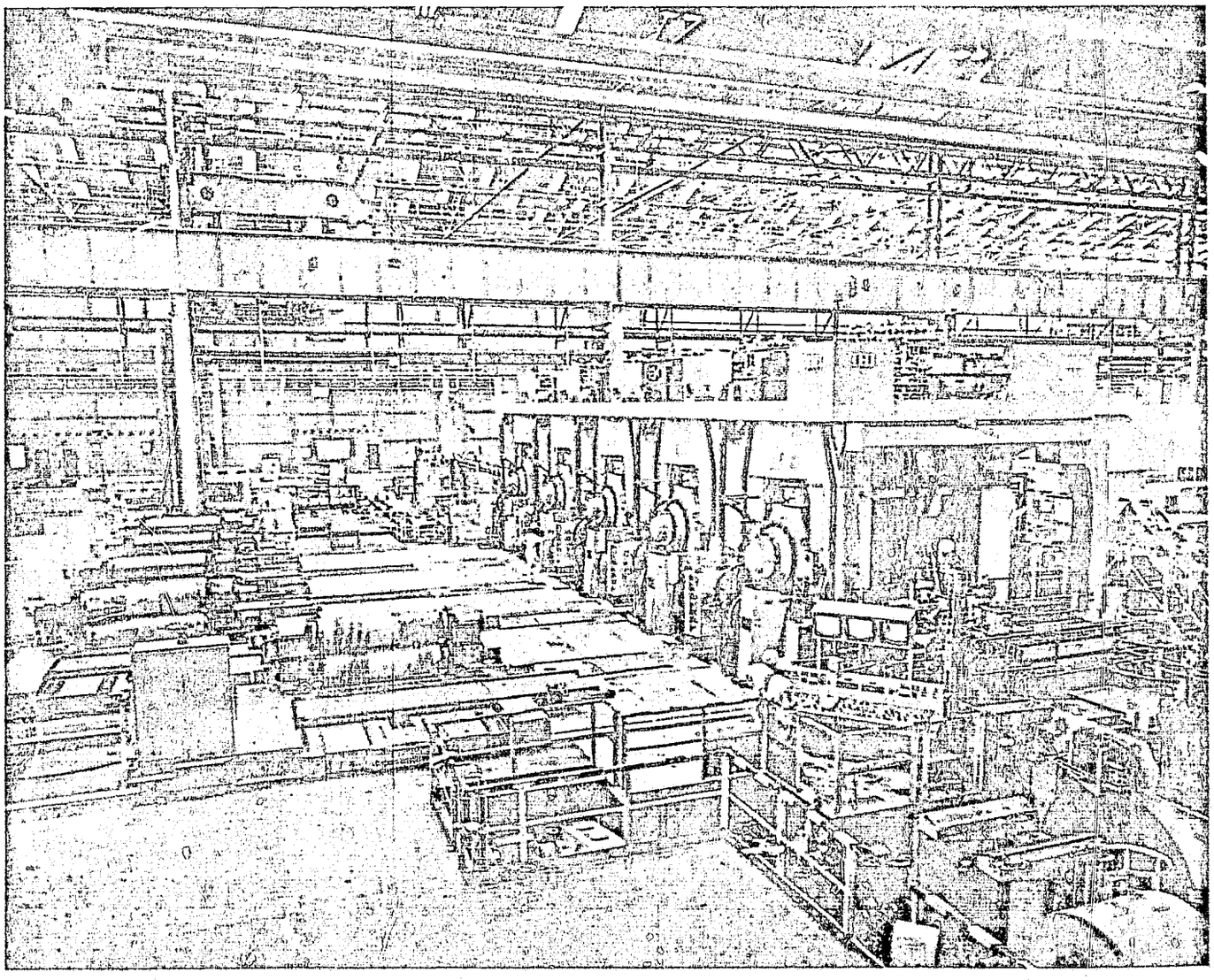
The question may also be asked whether the price policy did not perhaps have a distorting effect on the general economic development of the country, since it gives rise to misapplication of recources. The development of the secondary steel industry was artificially stimulated by it, particularly during the sixties. The sharp steel price increases granted in the recent past to make up to some extent, inter alia, for the accumulated arrears, have in turn made great demands price-wise on the capacity of the secondary steel industry to compete and expand in contrast with the position in the sixties.

IRON AND STEEL PRODUCTION

Total blast furnace production amounted to 4 542 546 tons, compared with 4 215 631 tons the previous year, reflecting an increase of 326 915 tons, or 7,8 per cent. To this total the Vanderbijlpark, Pretoria and Newcastle Works contributed 2 250 782, 1 459 725 and 769 219 tons of liquid iron, respectively, whilst 62 820 tons of liquid ferro-manganese were produced by the Newcastle Works.

The joint liquid iron production of 4 479 726 tons, used for pig iron and the production of steel, represents an increase of 307 741 tons, or 7,4 per cent, over the

The five-stand 2 050 mm cold-strip mill (product width 1 850 mm) at the Vanderbijlpark North Works, seen from the entry end.



comparative figure for the previous year. Production of ferro-manganese was 55 988 tons, as against 38 736 tons the previous year.

Ingot steel production totalled 4 678 906 tons, which was 329 239 tons, or 7,6 per cent, higher than the figure for the previous year. To this figure the Vanderbijlpark, Pretoria and Newcastle Works contributed 3 325 930, 1 352 882 and 94 tons, respectively. In addition, the latter works produced 497 187 tons of continuously cast blooms direct from molten steel.

MARKETING

Sales revenue

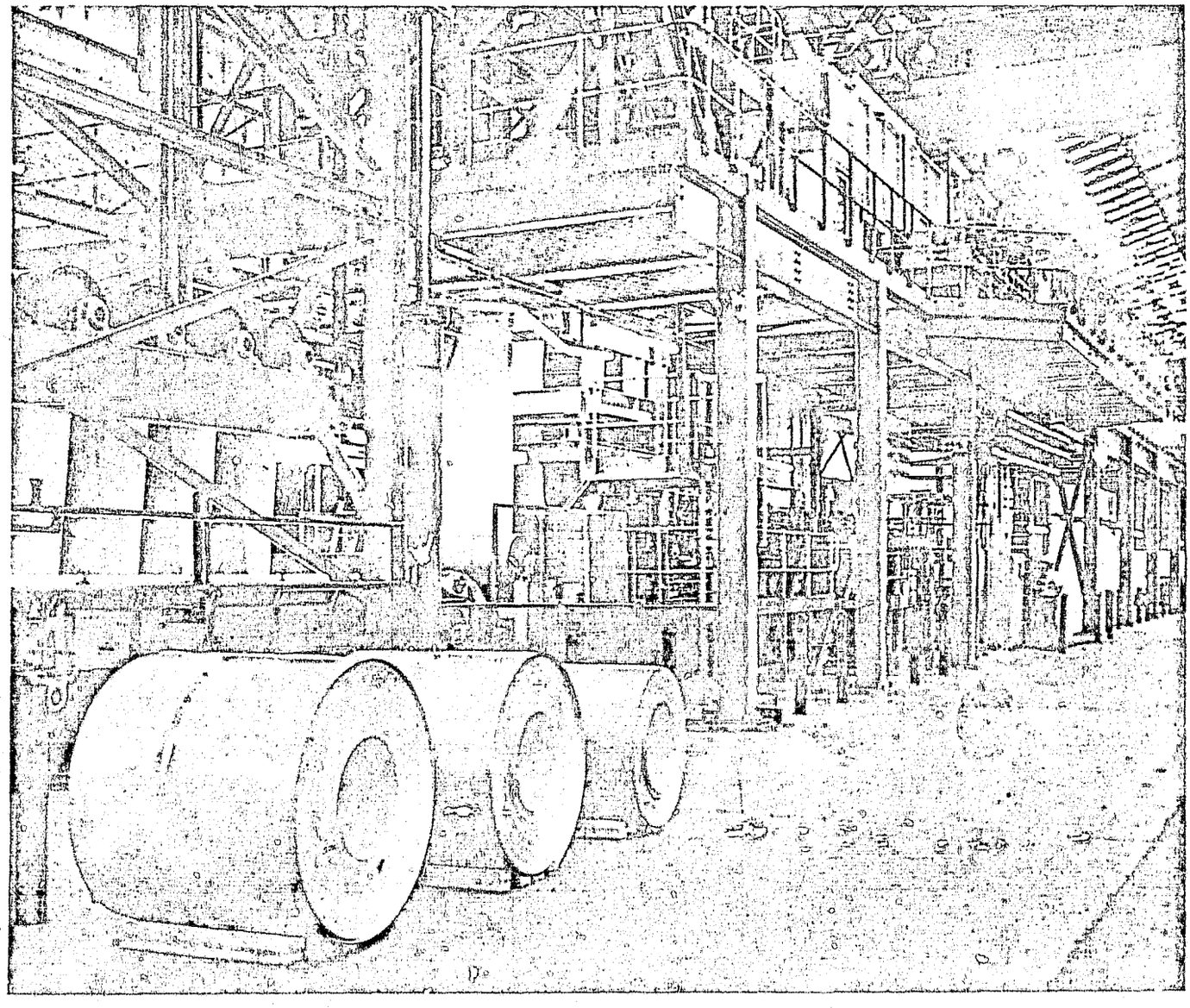
The turnover for the year totalled R799 004 737 which, after deduction of distribution costs of R17 301 696 and settlement discount, etc., amounting to R15 246 609, resulted in a net sales value of R766 456 432, as compared with R601 860 230 in the previous financial year. The tonnages and net sales value, f.o.r. works, for the various product groups are as follows:

Product	Tons	Sales value f.o.r. works (excluding export levy)
		R
Prime steel products	3 587 738	724 199 155
Pig iron, steel off-cuts and scrap, iron ore and miscellaneous	2 653 932	47 036 018
Coke oven by-products	223 278	10 467 868
Total		781 703 041
Less: Settlement discount, etc.		15 246 609
Net sales value		766 456 432

The net sales value represents an increase of 27,3 per cent over the figure for the previous financial year. The tonnage and sales value of prime steel products sold, show increases of 7,2 and 27,9 per cent, respectively, in comparison with the previous year.

The price increase by an average of 15 per cent on steel products and 20 per cent on pig iron, which

Coils of Chromadek colour-coated sheet at the finishing end of the continuous production plant at the Vanderbijlpark Works.



became effective on 7 May 1976, is calculated to have contributed about R14,7 million to the sales value of steel products and pig iron. The products exported during the year have been included in the sales figures, whilst the finished products imported by the Corporation on behalf of customers have not been taken into account.

Sales of steel products

The following is an analysis of steel sales according to broad product groups:

Product group	Tons	
Semi-finished products (semis)		134 400
Profile products:		1 257 000
Structural sections, bars and coiled rounds	611 900	
Rails and fishplates	258 100	
Wire rod and wire	380 000	
Forgings	7 900	
Flat products:		2 196 300
Plate	682 100	
Uncoated sheet	866 700	
Strip	111 800	
Galvanized sheet	291 900	
Tinplate and blackplate	243 800	
Total		3 587 700

The above figures include 113 642 tons of steel products with a sales value, f.o.r. works, of R21 167 133, used by the Corporation for its own extensions.

Share of the market

During the year an estimated total of 4 636 200 tons of rolled, drawn and forged steel products from South African and overseas sources was supplied to consumers in the Republic, South West Africa and neighbouring African countries. This represents a decrease of approximately 876 000 tons, or 15,9 per cent, as compared with the adjusted total of 5 512 200 tons supplied during the previous year.

Of the 4 636 200 tons, Iscor supplied 3 313 000 tons or 71,5 per cent and other South African producers 1 007 700 tons or 21,7 per cent, whilst 315 500 tons or 6 8 per cent was imported. The comparative adjusted percentages for the previous year were 59,4, 19,5 and 21,1, respectively.

Of the tonnage obtained from South African sources, the Corporation supplied 76,7 per cent and other steel producers jointly 23,3 per cent, as compared with 75,3 and 24,7 per cent, respectively, in the previous financial year.

Prices

The increase by an average of 15 per cent, or R29,89 per ton net, in the official price of Iscor's range of primary steel products which became effective in May, was applied selectively to the various products by percentages ranging from 10 to 17. Furthermore, the extras and deductions were adjusted by the same percentages as the basis prices of the individual products in order to maintain the mutual price relationships within the product ranges.

The third 150-ton electric arc furnace at the Vanderbijlpark Works. It was commissioned during the year under review.

The prices of pig iron were adjusted at the same time. Since the cost increases in respect of coking coal and railway tariffs have had a much greater effect, proportionally, on the cost of pig iron than on that of finished steel products, the prices of pig iron were adjusted by an average of 20 per cent, or R14,59 per ton net. The adjustment was also applied selectively to the various grades of pig iron by percentages ranging from 16,5 to 25. If the same average percentage as in the case of steel products were to be applied to the prices of pig iron, it would mean that pig iron would be supplied to customers at below cost.

Demand

As was indicated last year, it had already been clear at the end of 1974 that the abnormally high demand for primary steel products which had been experienced during the preceding two years, would not continue much longer. It so happened that the local demand for this type of steel products declined considerably during 1975 and the first half of 1976 and was appreciably lower during the year under review than during the preceding two years, when local production had to be supplemented by large-scale imports of certain steel products from overseas sources.

The past eighteen months were characterized by the worst recession in the international steel market since the end of World War II. In some countries at present there are signs of a slight improvement in prospects, but the general expectation is that any significant recovery would be a lengthy process.

Flat products

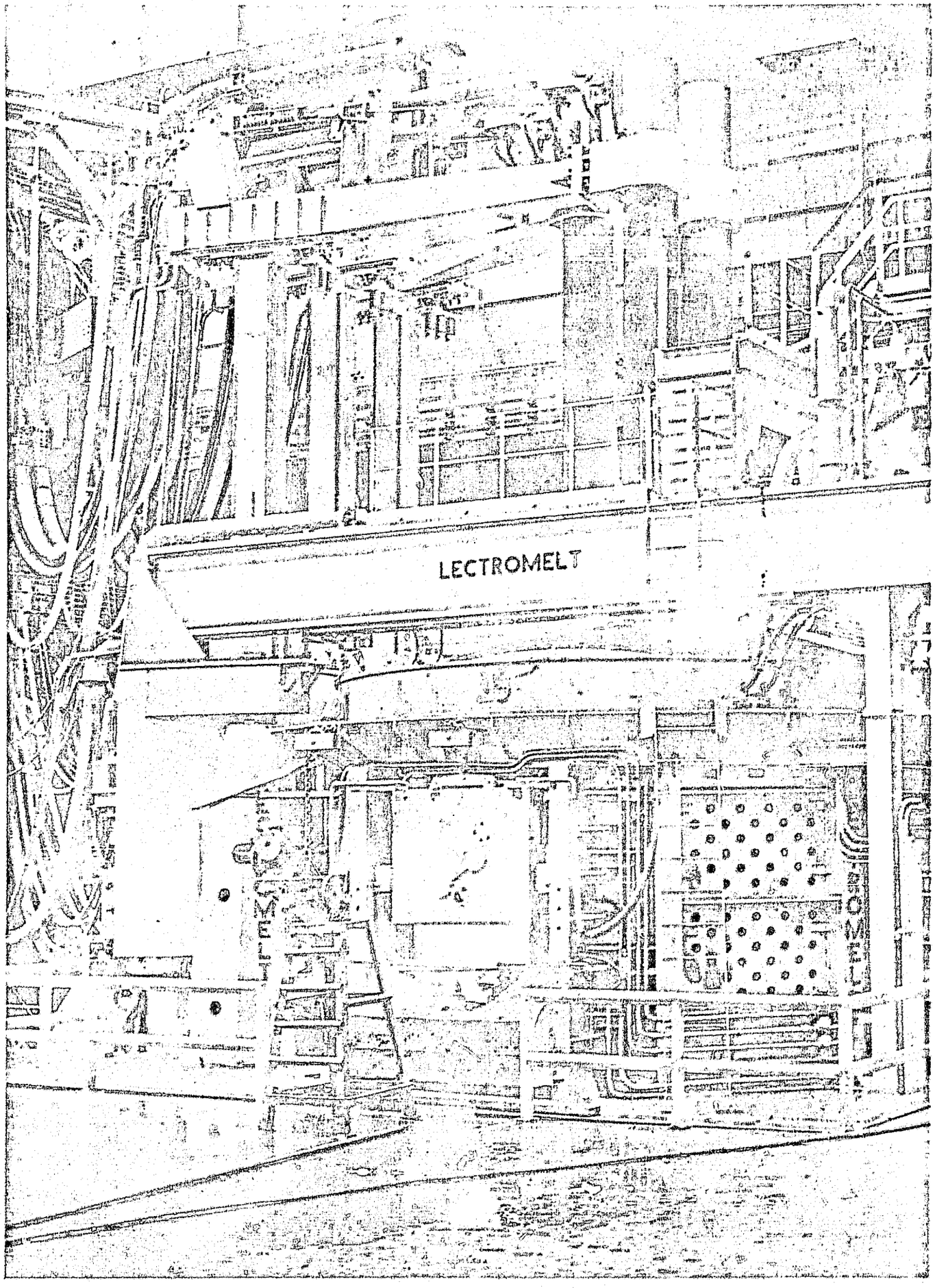
As far as flat products are concerned, the demand particularly for cold-rolled and galvanized sheet began to stabilize after a fall in the relatively high stock levels of customers. It is expected that there will be no appreciable increase in the local demand for cold-rolled and lightly galvanized sheet in the near future, since a recovery in the white-goods industry (such as electric stoves, deep-freezes, refrigerators and washing machines), the building trade and motor-car industry is not expected before the middle of 1977.

The demand for hot-rolled sheet declined in comparison with that in the previous financial year, mainly as a result of a reduction in the requirements of the pipe and tube manufacturing industries. Temporary rebates on primary steel products are at present being granted to customers in order to promote the exportation of secondary products.

A drop in the local demand for plate became evident only towards the end of the financial year.

Owing to the decline in the demand on the one hand, and an increase in the Corporation's production capacity on the other, it is expected to be capable of meeting the total domestic demand for flat products during the 1976/77 financial year, except for small tonnages of plate and cold-rolled sheet in special qualities, which will have to be imported.

In the case of tinplate, a reduction in the local demand, together with a simultaneous increase in production, resulted in imports from overseas sources being to a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large extent temporarily eliminated. Also, in terms of the provisions of the tinplate levy scheme, which is later discussed more fully, there was a considerable increase in local tinplate stocks for use within the next two to three years, when local production is expected to be exceeded by consumption. In addition, arrangements have been made for part of the surplus tinplate production to be exported to overseas countries.

Profile products

The local demand for virtually all light profile products began to show a sharp decline at a point of time when additional production capacity became available in the Newcastle Works in consequence of the commissioning of new production units. However, certain heavier profile products were not affected. The decrease in the demand for light sections and wire results from the current economic climate in the Republic, which drastically curtailed economic activity in the building, agricultural and manufacturing industries, as well as that of public authorities. The Corporation therefore made arrangements for the building up of certain stocks of process material as well as finished steel products and thereafter for the exportation of surplus tonnages to overseas countries. Arrangements have also been made with local customers to purchase certain steel products at temporary rebates for the manufacture of secondary export products.

As a result of the completion of certain extensions at the Pretoria and Newcastle Works, it is expected that the demand for all profile products will be met during the 1976/77 financial year. Only small tonnages of special sections and special quality steels may have to be imported.

Colour-coated sheet

As was planned, the coil coating line commenced with trial runs towards the end of the financial year. Normal production of colour-coated sheet, under the trade names of Chromadek and Textradek, will soon be available in various coating systems and laminations, for a variety of applications. Cold-rolled and galvanized sheet, as well as the Corporation's well-kown Supraspan roofing sheets, will be obtainable in these finishes. For the time being, ten colours were decided upon for exterior applications.

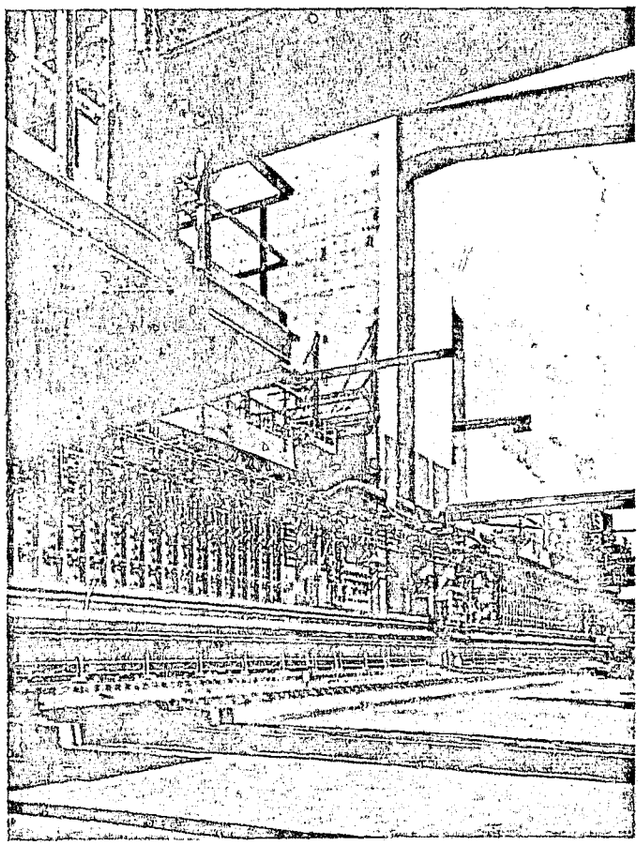
Berlin warehouse

In compliance with a Government directive, the Corporation took steps during the financia year to erect a warehouse near East London to encourage industrial development in that area and also to promote homeland development. The tender for the erection of the buildings has already been awarded, and the warehouse is expected to be put into use early in 1977.

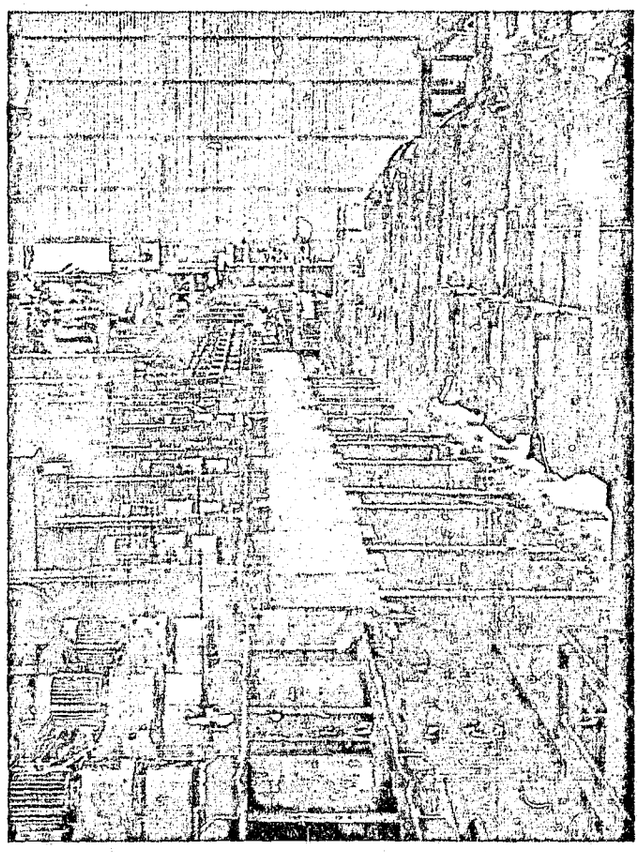
Tinplate levy scheme

The tinplate levy scheme was introduced in September 1975 with the approval and under the supervision of the Department of Industries in order to eliminate the price differences between imported and locally produced tinplate, as well as to cover the additional cost of stocking, which arose from a temporary surplus on local production. Under the scheme the additional cost in connection with imported tinplate and stocking of a temporary surplus on local production will be met by way of a product levy, at present R15 per ton net, imposed on all dispatches to customers.

Coke oven batteries Nos. 8 and 9 at the Vanderbijlpark Works.



The bloom reheating furnace at the billet mill, Newcastle Works.



Surplus tinplate production, over and above the normal requirements of consumers, is transferred to the scheme and financed by means of loans advanced by the Government and extended credit granted by Iscor.

The scheme, administered by Iscor, will continue until the calculated costs and all claims against it have been settled. Provided no imports become necessary, the scheme should terminate by the end of 1978.

Exports

In order to utilize the Corporation's production units to optimum extent, approximately 282 100 tons of miscellaneous steel products were exported to overseas countries during the year under review. The Corporation also continued to supply steel products to neighbouring African countries, which have been included in the local sales figures. However, the demand for steel in these areas declined considerably during the financial year in comparison with the previous year. In addition, 419 300 tons of iron ore were exported to Japan, Europe and the USA. Total earnings from these exports amounted to approximately R45,4 million, f.o.r. works/mines.

A start will be made by the end of September 1976 with the exporting of iron ore on long-term contracts through the new harbour of Saldanha Bay. The f.o.b. value of these exports is expected to reach an annual rate of about R100 million in December 1976, which should increase rapidly to approximately R200 million per annum as from April 1977.

Steel imports

The total quantity of rolled, drawn and forged steel products, excluding semi-finished products for rerolling, imported during the year, amounted to 315 500 tons, as compared with the adjusted 1 164 919 tons during the previous year. Of this total, Iscor imported approximately 110 000 tons, as compared with the adjusted 1 009 600 tons in the previous financial year. The bulk of the 110 000 tons was supplied before the end of 1975.

Vantin (Pty) Limited

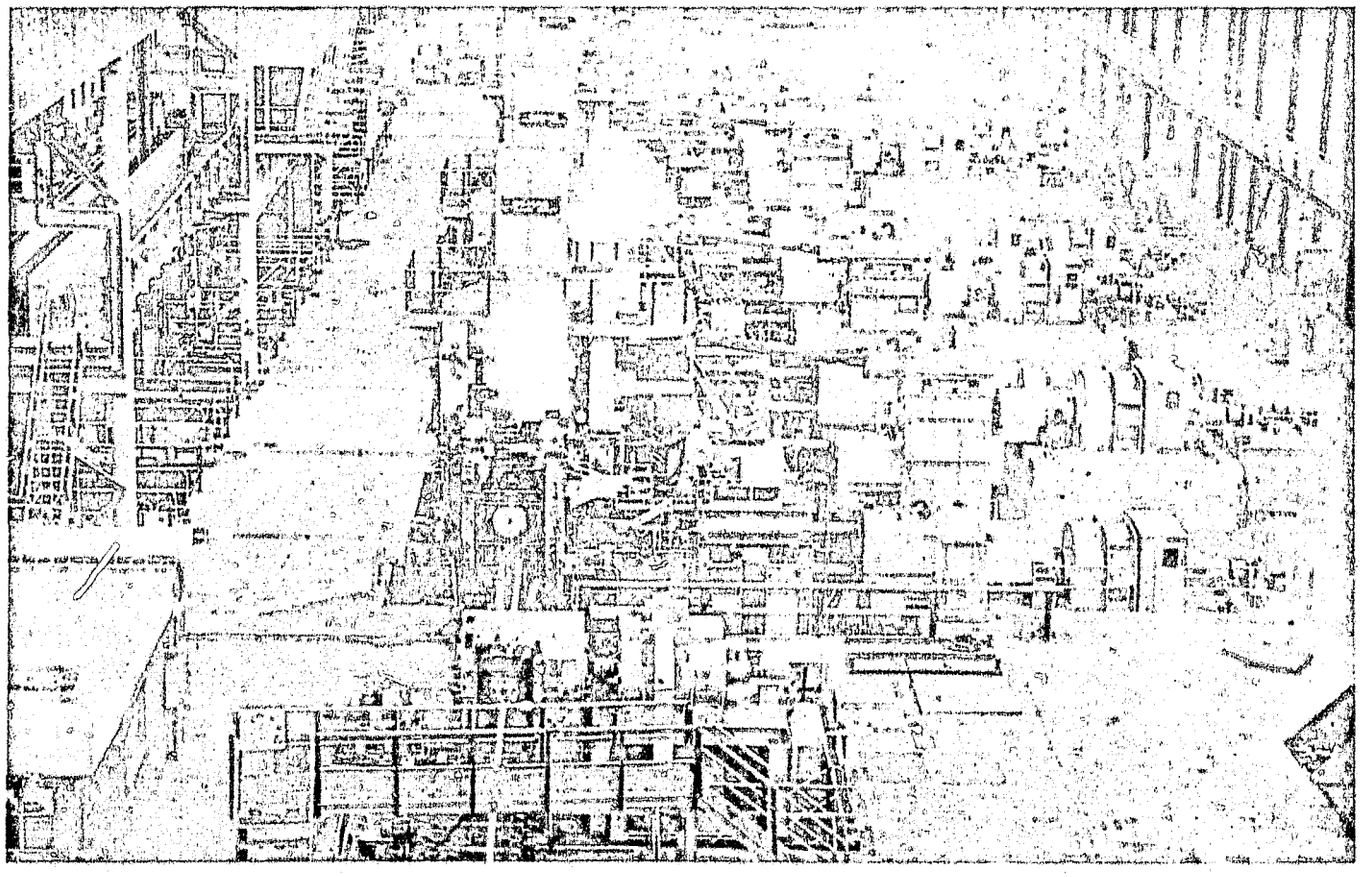
During the financial year, the Corporation acquired Bonuskor's shareholding of 30 per cent in Vantin. Consequently this company became a wholly-owned subsidiary of Iscor as from 9 June 1976.

Steelrec (Pty) Limited

In the course of the year under review, a company, Steelrec, was established jointly with African Gate Holdings Limited on a 50:50 shareholding basis. The object is to reclaim and sell certain types of steel scrap at the Corporation's works centres. However, scrap in respect of which there are already agreements and/or fixed arrangements are not included.

During the trial period, from April 1975 to the end of June 1976, a total of 20 831 tons of waste/off-grade material was supplied to the company at fixed f.o.r. works prices. This meant an overall extra revenue above scrap value at current official prices of R585 057 to the Corporation. In addition, that portion of the profit accruing to the Corporation over this period amounts to approximately R250 000.

The medium mill at Newcastle — one of the major units installed under the first phase of construction at this new steelworks.



EXTENSIONS

It remains the Corporation's policy, as far as is practicable, to play its part in meeting as much as possible of the country's steel requirements over the long term. For this reason, further extensions over the next few years are being planned, but due regard is taken of limiting factors, such as the problems in connection with the procurement of capital and raw materials and especially the acute shortage of coking coal and manpower. It is essential that an expansion programme be continually adapted to changing circumstances.

The rounding-off of the vast expansion programme on which the Corporation embarked in 1970, is now approaching completion, and it is planned at this stage that the Corporation will reach an annual production of approximately 6,5 million tons of liquid steel by 1978/79.

It is generally expected that the demand for steel will increase to such an extent that by 1985/86 Iscor will have to produce approximately 10 million tons of liquid steel at its works if it intends meeting its part of this demand.

The development plan for the remainder of the ten-year period is at present being determined in conjunction with the authorities, but full details, including the capital requirement, will be known only later. However, due account is taken of the detrimental effect it would have on the country's economy if the Corporation does not expand rapidly enough and if the shortage of steel would therefore have to be made up by imports from overseas.

Vanderbijlpark Works

In the course of the year under review the following major production units came into operation at this works:

- Two coke oven batteries, each with a production capacity of 1 100 tons per day, at R29,5 million.
- A third electric arc furnace, with a capacity of 150 tons, at R10,75 million.
- An iron ore bedding plant, with a daily throughput of 9 000 tons, at R8,2 million.

The following units should be commissioned during the current financial year:

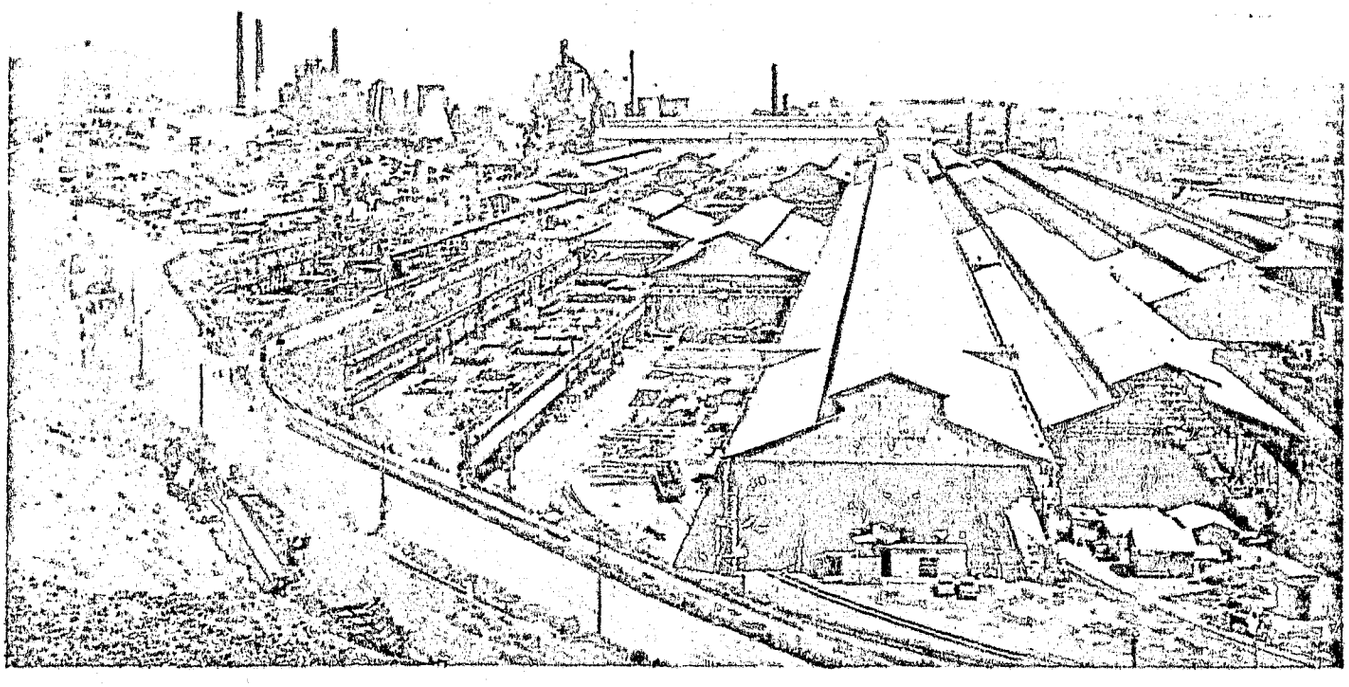
- Two continuous slab-casting machines, with a combined capacity of 125 000 tons per month, at R42 million.
- A vacuum arc degassing plant, for the production of high-grade steels, at R5,6 million.
- A galvanizing line to handle 1 600 mm wide strip in coils of up to 27,5 tons, at R17 million.
- A continuous painting and laminating plant, with a capacity of 9 000 tons per month, at R6 million.

The proposed annual production capacity of this works by 1978/79 is approximately 3,5 million tons of liquid steel.

Newcastle Works

The first phase of construction at this works is drawing to a close. Since production started in 1974, there has been a steady increase in the output of production units as they were progressively put into service. The only major plant which came into production during the past year was the medium section mill, which was

Part of the Pretoria Works, where modernization is still in progress.



built at a cost of R65 million, and has a capacity of 33 000 tons per month.

The following production units are in their final commissioning stages and will be brought into service in the near future:

- The last 100 of 200 coke ovens, at a total cost of R88 million.
- A new blast furnace of 3 000 tons per day, with ancillary equipment, at R70 million.
- A sinter plant with a capacity of 6 100 tons per day, at R18 million.
- A continuous slab-casting machine, with a capacity of 60 000 tons per month, at R22 million.

All the production units planned for the first phase of this new works will be completed in the course of the current financial year. This will bring the annual liquid steel capacity of the works to about 1,8 million tons.

Pretoria Works

Modernization of the Pretoria Works was continued during the year, the major project in this regard being the heavy-mills complex. This complex, the construction costs of which up to the end of the financial year amounted to approximately R65 million, will initially have a monthly production capacity of about 40 000 tons of finished products. After further additions to the reheating furnaces and the finishing section, the capacity will be increased to 70 000 tons. Installation of the four-stand universal beam mill has been completed since the end of the year under review, and full computer control of this mill should be realized by the end of 1976. A licence agreement is at present being negotiated with a view to modifying portion of the mill to provide for the rolling of rails according to the universal-rolling method.

By 1978/79 this works will produce approximately 1,4 million tons of liquid steel per annum.

For the future extension of the Pretoria Works, approval in principle has now been obtained from the authorities concerned to site new production units at Rosslyn, north of the city, where the Corporation acquired land for this purpose during the previous financial year. Conditions attached to this clearance are that production capacity at that site be limited to 3 million tons of steel per annum, that the best practicable means of pollution abatement be employed and that due account be taken of the surroundings for the siting of the proposed extensions.

However, it is planned that the Rosslyn extensions be undertaken only at a later stage.

SUPPLIES

The value of the Corporation's total stocks, after deduction of depreciation, amounted to R395 million, comprising R173 million in stores stocks, R189 million in process materials, rolls and ingot moulds, and R33 million in raw materials.

The value of contracts concluded and orders placed for capital plant and equipment, including civil engineering work on capital extensions, was R267 million. The value of orders placed for consumable stores, refractories and spares amounted to R232 million, and for purchased raw materials R149 million. The value of the Corporation's total buying activity for the year under review was therefore approximately R649 million, compared to R585 million for the previous financial year.

Reclamation activities, covering the sale or use of reclaimed and redundant materials, spares, etc., yielded approximately R3,9 million, compared with R4,8 million during the previous financial year.

MINING

It goes without saying that the Corporation will do everything in its power to supply its three integrated works with the best raw materials in order to achieve the optimum operating results. It has succeeded in this purpose, except in respect of coking coal, where it was faced with numerous problems because there is an acute shortage of high-grade coking coal reserves in the Republic.

Iron ore

Dispatches of iron ore from the south plant of the Sishen mine amounted to 4 969 300 tons, which is 14 per cent more than the 4 352 300 tons of the previous financial year. Of this amount, 400 600 tons were intended for export through Port Elizabeth and 20 300 tons through the Corporation's new harbour at Saldanha Bay, whilst 132 200 tons were sold in the Republic. The bulk, namely 4 416 200 tons, was dispatched to the Vanderbijlpark and Newcastle Works, and to a smaller extent to the Pretoria Works.

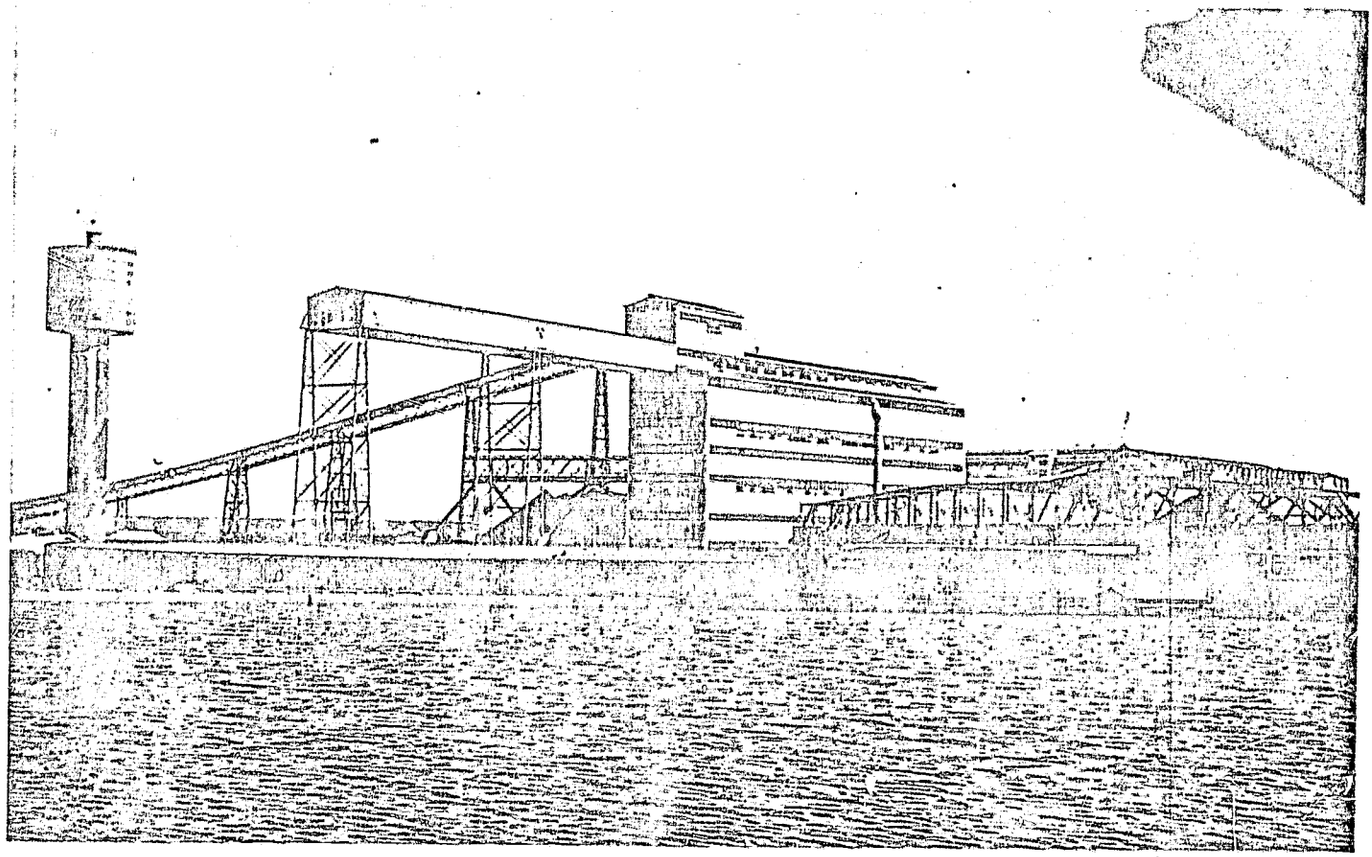
Since the commissioning of the north plant at Sishen at the end of February 1976, 730 000 tons of iron ore passed through the primary crusher, and the production of final products up to the end of the financial year amounted to 330 000 tons. The transporting of treated ore over the new railway line to Saldanha Bay commenced at the end of the financial year.

In Kathu, the new township, already 868 residential units, including 50 flats, had been completed at the end of the year under review, whilst one half of the new apprentice hostel was already occupied. Building work on the hostel complex for Bantu employees has advanced to the extent that about 1 000 persons are accommodated there.

The Thabazimbi mine, which supplies iron ore mainly to the Pretoria Works, dispatched 1 879 300 tons during the year, as compared with 2 107 800 tons in the previous year. This smaller tonnage must be ascribed principally to the heavy rainfalls which repeatedly caused the ore pass in the eastern section to become clogged with wet fine ore and shale. The eastern quarry, which has played a key role in Thabazimbi's ore supply for the past 40 years, is now almost exhausted, and at the end of 1976 the new Donkerpoort quarry will take over its function.

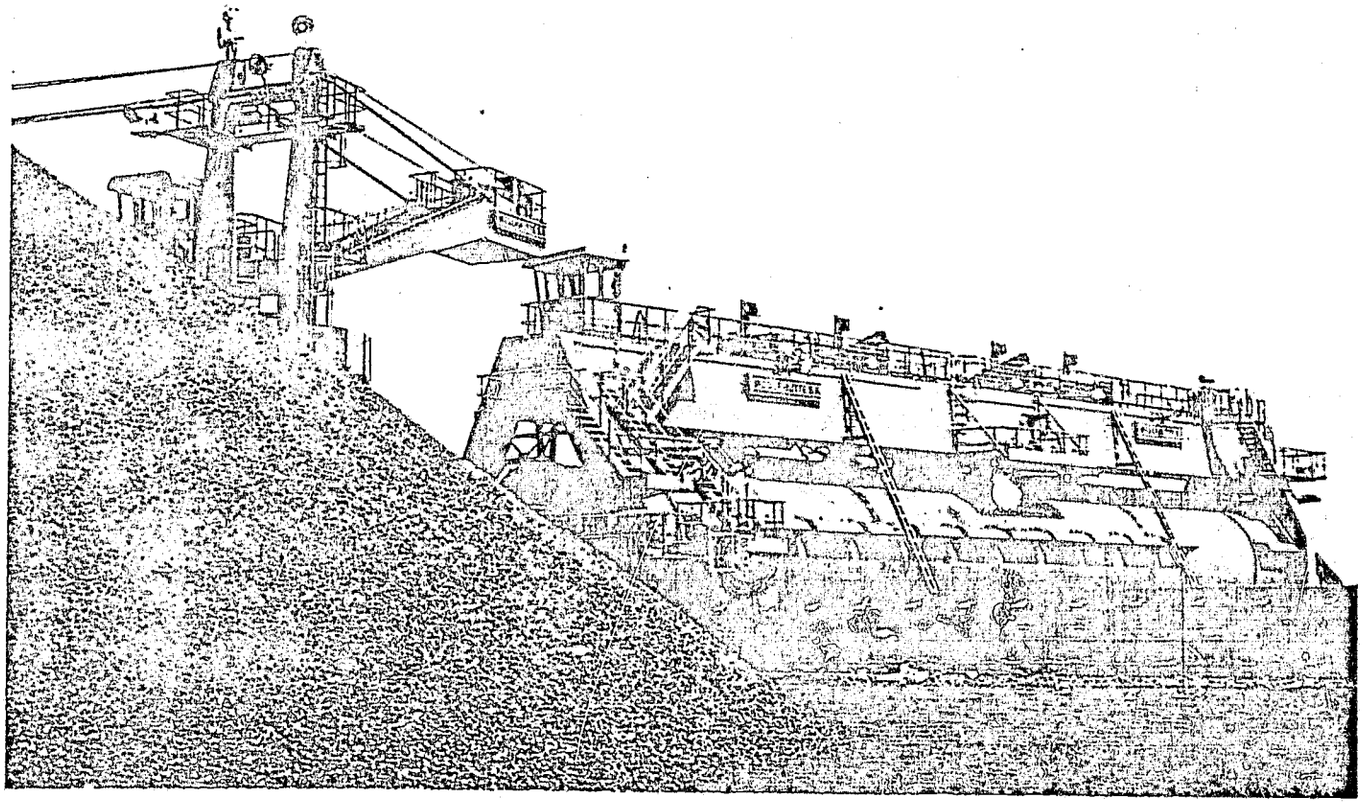
Coal

The Corporation's wholly-owned subsidiary, The Durban Navigation Collieries (Pty) Limited, supplied 840 500 tons of straight coking coal to the various works. This represents 16 per cent of the Corporation's metallurgical coal requirements during the year. The present planning in regard to coking coal is based on the doubling of this mine's annual production to 1,63 million tons. During the year a further 1 783 500 tons of straight coking coal were purchased from other mines in Natal



The washing and screening plant of the new ore treatment plant at the Sishen iron ore mine.

Export iron ore stacked at the new bedding plant at the Sishen mine, with a drum reclaimer on the right and part of a stacker in the left background.



and 2 389 900 tons of blend coking coal from Transvaal collieries, whilst 200 200 tons of blend coking coal were imported from Rhodesia. Apart from this metallurgical coal, the Corporation had to purchase an additional 431 900 tons of ordinary coal for the generation of steam and gas.

The fact that, during the last nine months of the financial year, the Corporation sometimes received up to 25 per cent less coal from its suppliers than was required, was due to several factors. These critical shortages once again proved to Iscor how vulnerable it is in this respect and how dependent it is on other coal producers. Until such time as exploration has established beyond doubt that there are other suitable sources of straight coking coal in the country which are economically exploitable, the Corporation will be obliged to import about 7 per cent of its total coal requirements in the form of high-grade straight coking coal. This should help overcome the current shortages and would hopefully also lead to improved blast furnace production. Negotiations for the importation of this type of coal from the United States over a period of two years for blending with South African coal, have reached an advanced stage.

At the Grootegeluk coal mine, a start has been made with the development of the quarry and the infrastructure of the mine. Approximately 2,3 million tons of overburden were removed to reach the coal deposits, whilst housing and services were provided. The commissioning of the mine is planned for January 1980.

Dolomite

The large-scale extensions at the Corporation's Glen Douglas dolomite quarry have just been completed, and production is in full swing to meet the increased demand for dolomite. During the year 347 400 tons of dolomite were dispatched to the Vanderbijlpark Works and 154 700 tons to the Newcastle Works, whilst the Mooiplaas quarry sent 467 100 tons to the Pretoria Works and 73 200 tons to the Vanderbijlpark Works.

Tin

The Uis tin mine in South West Africa, which belongs to the Corporation's wholly-owned subsidiary, Industrial Minerals Mining Corporation (Pty) Limited, produced 1 160 tons of tin concentrate, with a tin metal content of 63,4 per cent and dispatched it to the smelting plant at the Vanderbijlpark Works. This tonnage represented 46 per cent of the Corporation's requirements. The remainder had to be purchased from Rhodesia and from Zaaiplaats at Potgietersrus.

Zinc

The Prosh Pinah zinc mine, operated by Imcor Zinc (Pty) Limited, in which Iscor has a controlling interest, dispatched 25 030 tons of zinc concentrate, with a zinc metal content of 50,6 per cent, for processing to Zincor's works near Springs. In addition, 7 023 tons of lead concentrate were produced and sold in South West Africa.

The old mining area was exhausted during the year, and operations were switched over to the new ore body without any loss in production.

Refractory sand

The sand works at Fortsig, near Pretoria, supplied 19 940 tons of refractory sand to the various works for ladle linings. The use of this sand instead of refractory bricks, effected a saving of R469 200 during the financial year.

Raw materials exploration

The emphasis is still falling on the search for coking coal. In the eastern Soutpansberg area drilling operations proceeded satisfactorily during the latter half of the year, and it is hoped that at the end of 1976 certain areas will have been demarcated for more intensive examination. Exploration work has also been continued in northern Natal, where evidence was found of several deposits and options were exercised on a number of properties.

Second-phase exploration for carbonate fluxes in the Vanrhynsdorp district has been completed. A major deposit of high-grade limestone and a considerable reserve of metallurgical dolomite were proved, but more work will have to be done in respect of the latter to determine the full extent of the deposit.

SISHEN-SALDANHA BAY PROJECT

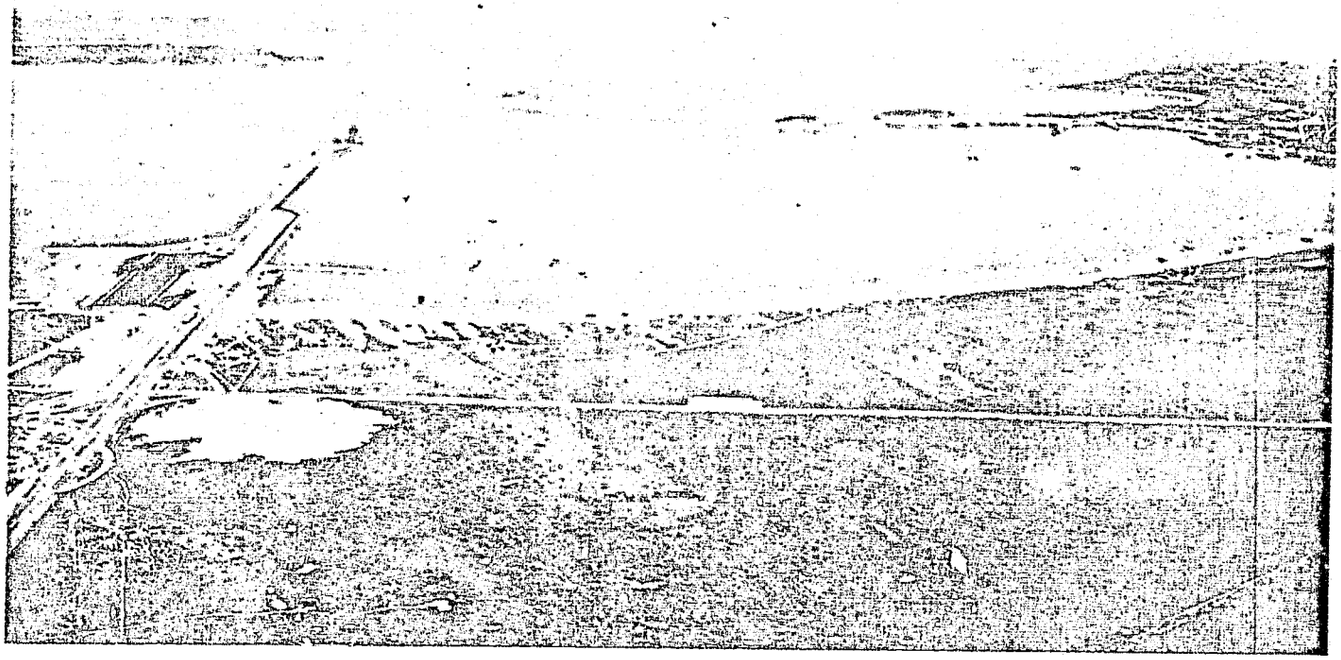
Particularly good progress was made with construction work on this project during the year. On 7 May 1976 the mine was linked by railway line with the new export harbour at Saldanha Bay over a distance of 861 km, and a week later the first train with Sishen ore arrived at the terminal — nearly three weeks earlier than the date determined as far back as 1972. Since then iron ore was transported mainly with ballast trucks, which are at present being used owing to delivery problems experienced with the special ore wagons. At the end of the year under review, 86 of the ore wagons were in use. They are equipped with cross-anchor bogies, which promotes train stability and reduces wheel and rail wear. A total of 1 750 of these wagons were ordered, each with a carrying capacity of 81 tons.

The wagon tippler and one of the stacker/reclaimers at the port were also commissioned during the year without any significant problems, and increasing stocks of iron ore for export are stacked on the stockpiling area. Work on the second stacker/reclaimer is nearing completion, whilst construction of the ship loaders and ore jetty is proceeding according to plan. In February 1976 the breakwater linked Marcus Island with the land, and finishing work has nearly been completed.

In the course of the year 294 residential units for Whites and 262 houses for Coloureds were completed in the Saldanha Bay vicinity. Apart from single quarters for both Whites and Coloureds, the building programme in respect of residential units in this area has been completed, whilst the building programme for the houses of maintenance personnel along the railway line has been postponed.

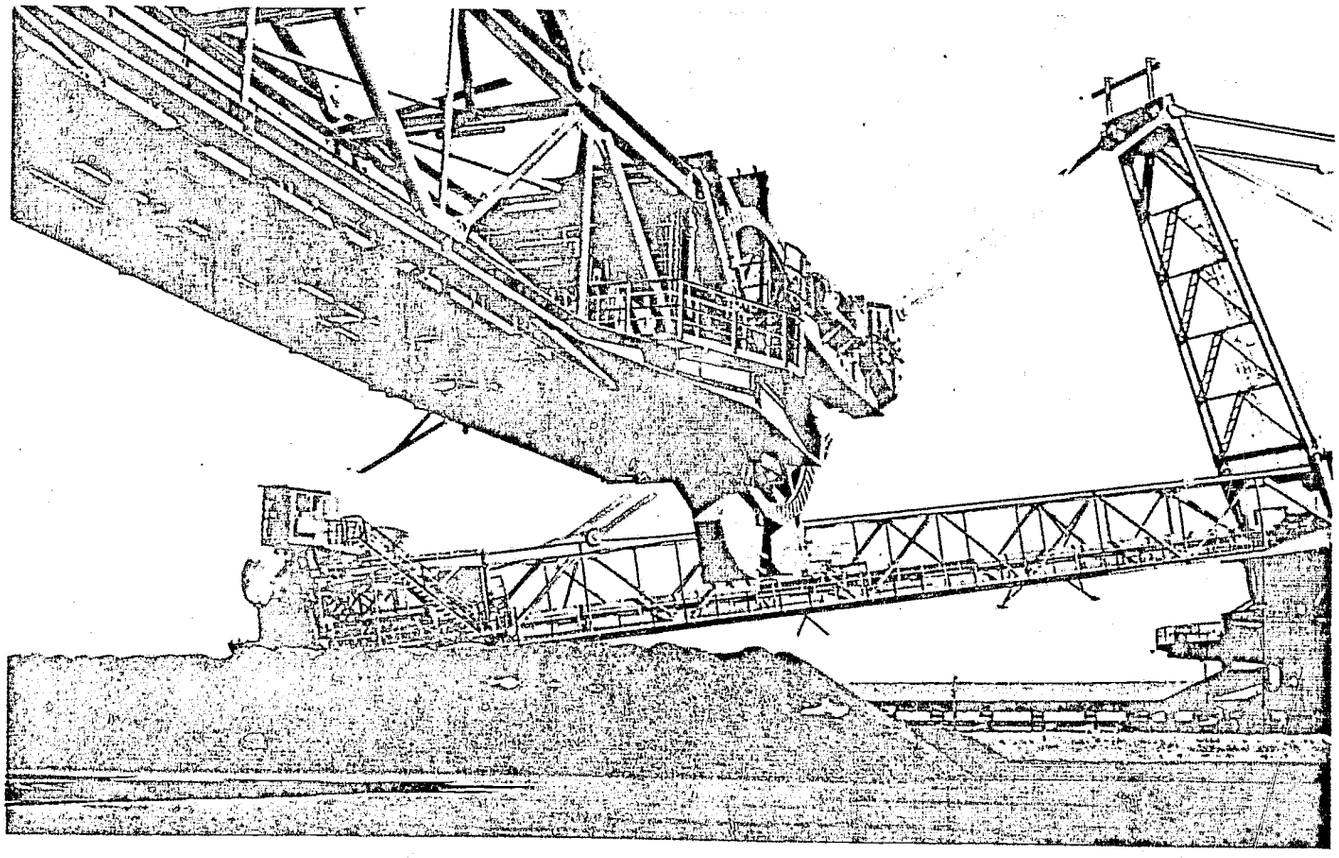
After careful consideration, the Corporation decided to electrify the railway line with an operating voltage of 50 kV, and several contracts for this work have already been awarded. Work on the overhead line is proceeding according to plan. If everything goes well, the railway line will be fully electrified by the middle of 1978.

As was already announced, negotiations were entered into with the South African Railways after the end of the financial year to investigate a possible take-over of the railway system and harbour facilities by the SAR.



An aerial view of part of Saldanha Bay, with the ore stockpiling area and the causeway on the left and the breakwater in the right background.

The two stacker-reclaimers at the ore stockpiling area at the Saldanha Bay terminal.



PERSONNEL

The salary and wage expenditure of the Corporation during the financial year amounted to R239,8 million, as compared with R192,5 million in the previous year. The labour strength at the end of the financial year was approximately 27 200 Whites and 28 000 Non-Whites, including 460 Asiatics and 275 Coloureds. These earnings and employee figures do not include those in respect of the Uis tin mine and the Rosh Pinah zinc mine, nor those of employees of the Durnacol coal mine, who fall under the Natal Coal Owners' Association agreement.

The increase in the salary and wage account by approximately R47,3 million is ascribed mainly to the rise in the employment figures by 2 600 Whites and 2 900 Non-Whites on account of new extensions, together with the salary and wage adjustments made at the end of the 1974/75 financial year but the effects of which were felt only during the past financial year.

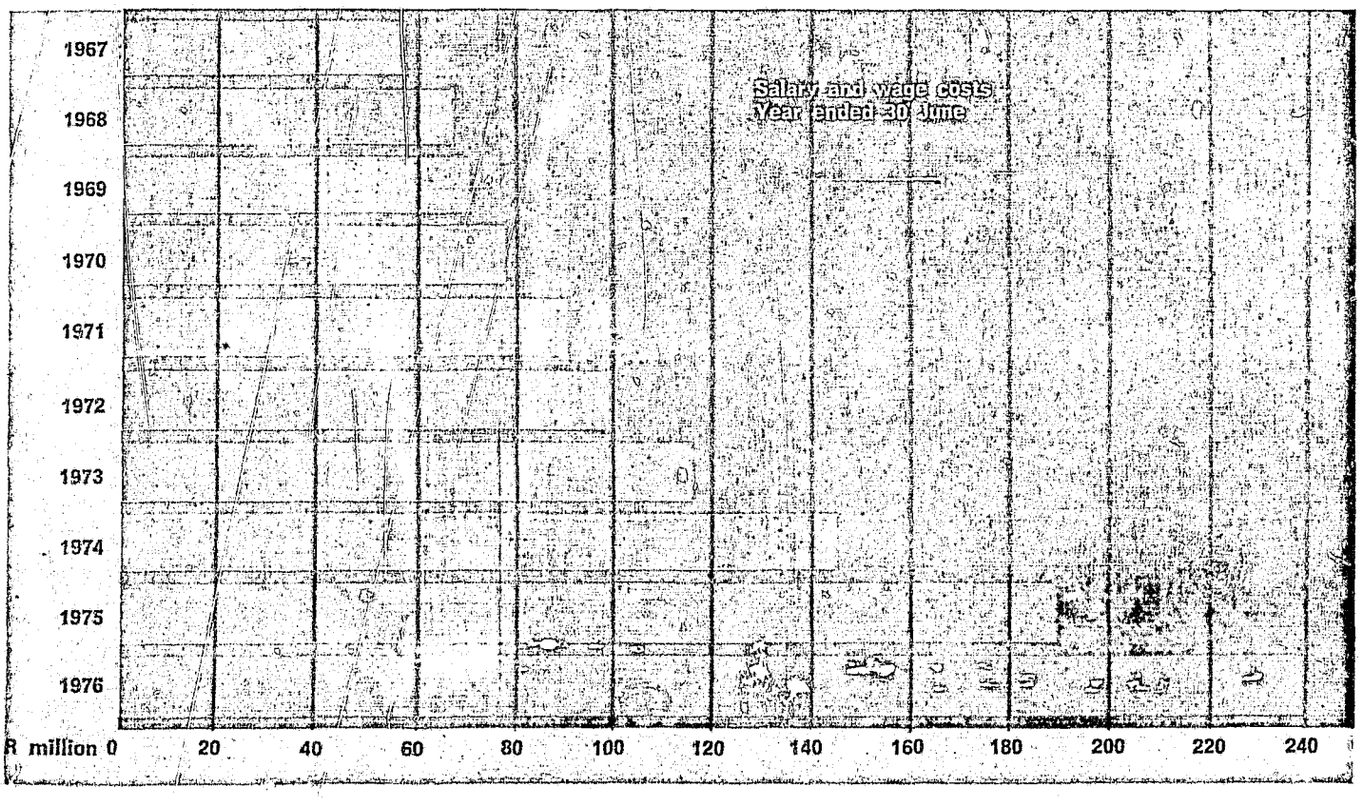
The Corporation's manpower position during the year under review has been reasonably good. With the exception of artisans at Vanderbijlpark and Newcastle and a few "scarce" occupational groups, supply on the local labour market has been satisfactory. This state of affairs was due mainly to two factors, namely the current subdued economy of the country, which resulted in an increased supply on the labour market, and the sustained publicity campaigns on the part of Iscor.

As far as recruitment on the overseas labour market is concerned, the Corporation has had a reasonable measure of success, and 879 immigrants assumed employment at the various Iscor centres during the year. This number includes 421 artisans, 381 production workers and 27 engineers. As a result of the favourable position in regard to production workers in the Republic, the overseas labour market will henceforth be utilized only for the recruitment of artisans and other technically skilled groups in which severe shortages are still being experienced. Iscor is satisfied with the immigrants recruited during the past few years.

The utilization of female labour in certain posts traditionally occupied by men, is still given priority, particularly at the Vanderbijlpark and Pretoria Works, and 979 women are at present incumbents of production worker posts previously classified as male posts. In addition, a considerably greater number of administrative posts throughout the Corporation are occupied by women.

Owing to the increase in the class and boarding fees at universities, Iscor had been obliged to raise the value of its bursary loans by a further R200 to R1 200 a year as from 1 January 1976. The Corporation is this year assisting 272 persons by means of its bursary loan scheme, 73 of whom are new bursary holders. A total of 40 students completed their studies at the end of 1975 and were placed at various centres, mainly as assistant engineers. It is expected that 47 bursary holders will complete their studies at the end of 1976.

At 30 June 1976 there were 3 309 apprentices in the Corporation's service at the five different centres where trades training is provided, whilst 409 acquired artisan status in the course of the year. Apprentices from the Grootegeluk coal mine are at present being trained at the Thabazimbi trades training centre.



During the year under review, a start was also made at Newcastle with the training of Indian apprentices, of whom 65 are already in service.

Considerable success was achieved with the employment of Coloureds at Saldanha Bay. In the year under review, the labour turnover amongst Coloured employees was only 25,6 per cent. The large number of enquiries and applications for work which are being received, is an indication of the extent of the Coloured labour market in the Western Cape. The success with which the Corporation is utilizing this source of labour, may be ascribed inter alia to the attractive fringe benefits offered, particularly in the field of housing.

During the year the programme for the training of managers and potential managers of the Corporation was continued. Up to now, 85 senior managers have already completed or partially completed the Advanced Management Programme (AMP) of the University of South Africa, whilst 110 attended an abridged course in managerial techniques offered by the same university. During the year, a start was made with the Management Development Programme (MDP) for middle management, which is also offered by Unisa, and 10 Iscor employees are at present enrolled under this programme. By offering internal courses, the Corporation is furthermore ensuring that the knowledge of its management group is maintained at as high a level as possible. The training of supervisors and administrative personnel is effected mainly by means of internal courses.

The success of the Corporation's various training schemes in helping to develop and orientate its employees with a view to increasing productivity, has roused interest even from outside Iscor. Many enquiries were also received regarding the truck simulators for the training of Bantu operators at the mines, which were developed and built by the Corporation. Outside firms, mainly truck manufacturers, are interested in similar equipment.

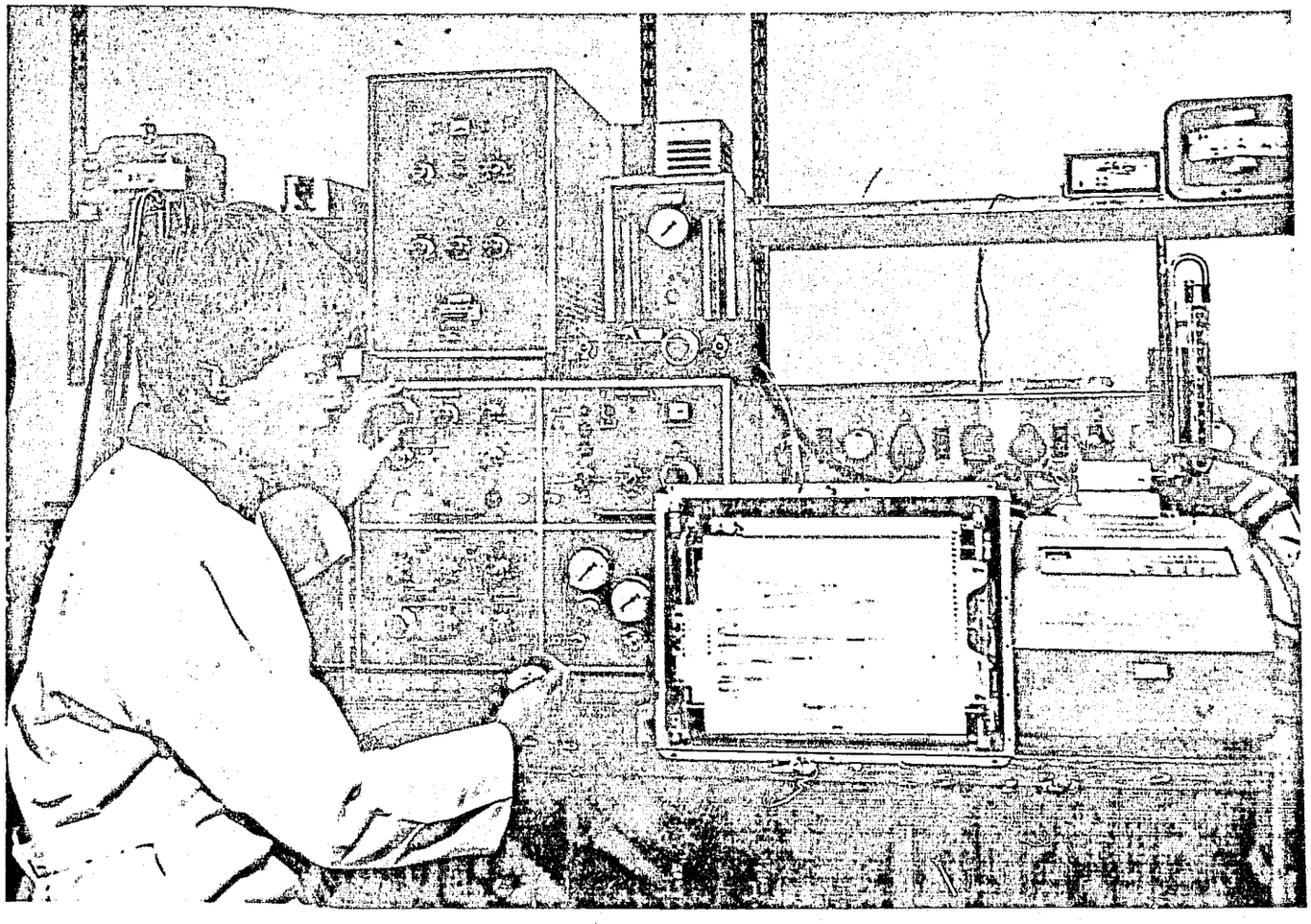
The introduction of a second Iscor pension fund on 1 January 1976 was the start of a new dispensation for Indian and Coloured employees. They may now also participate in a contributory pension fund, in contrast with the Corporation's non-contributory retirement fund for Non-Whites, which had previously been the only fund available to these employees.

The Dorbyl and Fowler groups of companies terminated their membership of the Iscor Group Life Assurance Scheme on 30 June 1975. However, these withdrawals did not seriously affect the membership of the scheme, and there are once more 31 400 members as was the case on the above date. The underwriter's risk in the scheme at present is R417 million, and during the financial year at least R2,5 million was paid out to members or their dependants in the form of disability and death claims.

CONTROLLED AND ASSOCIATED COMPANIES

The affairs of public companies associated with Iscor

A laboratory assistant of Materials Research at a gas chromatograph. This equipment is used by the Research and Process Development Department for quality control of by-products and the solving of related production problems.



are dealt with by their chairmen in their respective annual reports.

During the financial year under review the Corporation disposed of its entire shareholding in International Pipe and Steel Investments South Africa (Pty) Limited and, as was mentioned previously, acquired the full shareholding in Vantin (Pty) Limited. In collaboration with the South African Marine Corporation Limited, a shipping company, Safore (Pty) Limited, in which Iscor has a minority interest, was registered for the purpose of carrying a proportion of the Corporation's iron ore shipments from Saldanha Bay. As already mentioned, the Corporation also, in conjunction with African Gate Holdings Limited, registered Steelrec (Pty) Limited.

The other companies in which Iscor has a direct or indirect financial interest and whose operations supplement its main functions, are the following:

(i) Cape Town Iron and Steel Works (Pty) Limited (Cisco), for the production of reinforcing rod for sale to Iscor's customers in the Cape Town area.

(ii) Yskor Newcastle Grondbesit Beperk, on whose property the south works at Newcastle is situated.

(iii) Minsa (Pty) Limited, Iscor Housing Utility Company, Iscor Estates (Pty) Limited and Vanderbijl Park Estate Company, for the provision of housing facilities for employees and for general property development.

(iv) Tornado Enterprises (Pty) Limited, for the provision of warehouse facilities at Alrode in the Transvaal.

(v) The Durban Navigation Collieries (Pty) Limited, Industrial Minerals Mining Corporation (Pty) Limited and Imcor Zinc (Pty) Limited, for the provision of essential raw materials in the form of coking coal and base metals, and Ferrous Scrap Distributors (Pty) Limited, for scrap.

(vi) Heckett (SA) (Pty) Limited, for the recovery of scrap; Iscor Utility Stores (Pty) Limited, Air Products (SA) (Pty) Limited and Steel Sales Company of Africa (Pty) Limited, for the provision of employee services and as media for the sale and distribution of Iscor products; and Rhodesian Steel Sales Company (Pvt.) Limited which, through its wholly-owned subsidiary, Iscor (Rhodesia) Steel Sales Company (Pvt.) Limited, undertakes the sale of the Corporation's products in Rhodesia.

(vii) Metpro Developments (Pty) Limited, which concentrates on the manufacture of brake shoes for rail traffic and supplies shoes for the Sishen-Saldanha Bay railway.

(viii) Iskop (Pty) Limited, for the production and sale of "black" products arising from the coke oven operations.

(ix) Iscor-Iran Company Limited and Iskoor Steel Services Limited, established in conjunction with local interests in Iran and Israel, respectively, to promote the sale of the Corporation's products in those countries.

(x) An overseas service company in London, to assist with the administration of the Corporation's affairs in Europe.

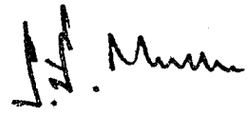
The Corporation also has a representative in London and agents in the United States of America, South America, the United Kingdom, Italy and Mauritius.

DIRECTORATE AND MANAGEMENT

There was no change in the Corporation's directorate during the year, but since the end of the year The Honourable J. F. W. Haak resigned as a director. I wish to thank him for his valuable services rendered over a period of more than six years.

Once again I must express my appreciation for the assistance and guidance of my co-directors during what is certainly the most difficult period in the history of the Corporation. I also wish to record my thanks to the Managing Director, Mr. J. P. Coetzee, the General Manager, Mr. K. R. Rümelin, members of management and all other employees for their loyal service.

At the meeting I will move that the report of the directors and accounts, as submitted, be approved and adopted and that all things undertaken and performed on behalf of the Corporation, be confirmed.



Pretoria — T. F. Muller

29 September 1976 — Chairman

South African Iron and Steel Industrial Corporation, Limited

Annual Financial Statements

for the year ended 30 June 1976

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Statement of source and application of funds	31

Board approval

The annual financial statements which appear on pages 23 to 31 were approved by the Board of Directors on 25 August 1976 and are signed on its behalf by

T. F. Muller
J. P. Coetzee | Directors

C. H. McLuckie Secretary

Report of the auditors

To the shareholders of South African Iron and Steel Industrial Corporation, Limited (constituted and incorporated by Act of Parliament in the Republic of South Africa).

We have examined the annual financial statements of the Corporation set out on pages 23 to 31 for the year ended 30 June 1976.

In our opinion, based on our examination, they fairly present the financial position of the Corporation and the results of its operations for the year then ended.

Altmann and Brugman
Peat, Marwick, Mitchell & Co.
Chartered Accountants (S.A.)

Pretoria and Johannesburg
15 September 1976

Report of the Directors

The directors have pleasure in presenting their report on the results and activities of the Corporation for the year ended 30 June 1976.

Financial results

The trading profit and other income showed an improvement of R7 236 000 from R51 991 000 in 1975 to R59 227 000 this financial year after charging an amount of R49 495 000 (1975—R34 281 000) to production costs in respect of reserve for increased replacement cost of fixed assets. After charging the cost of financing of R87 657 000 (1975—R87 865 000) and providing R1 627 000 for writing down an investment, the Corporation reflected a loss for the year of R30 057 000 (1975—R35 874 000). Notwithstanding this loss, it should be noted that due mainly to the fact that R49 495 000 was reserved for increased replacement cost of fixed assets, 'Distributable reserves' increased by R19 405 000 from R338 259 000 at 30 June 1975 to R357 664 000 at 30 June 1976.

Capital employed

The Iron and Steel Industry Act, 1928 was amended during the year, whereby the Corporation's prescribed share capital was increased by 147 000 000 B shares of R2 each from 353 000 000 to 500 000 000 B or preference shares of R2 each.

During the year a further 95 000 000 B shares were issued at par to the State President, which resulted in the total issued and fully paid capital increasing from R325 200 000 to R515 200 000.

The Corporation made further stock issues, entered into loan and revolving credit agreements and utilized suppliers credit during the year, which resulted in fixed period loans increasing by R583 006 000 to R1 868 706 000 (1975—R1 285 700 000).

Fixed assets

The additional investment in fixed assets during this financial year amounted to R637 910 000 (1975—R570 386 000).

The net book value of fixed assets at the year-end amounted to R2 208 937 000 (1975—R1 638 132 000) which includes extensions under construction of R905 049 000 (1975—R552 161 000). 'Extensions under construction' includes expenditure of R454 858 000 (1975—R247 504 000) for the Sishen-Saldanha scheme.

Interests in controlled and associated companies

The net increase of R45 371 000 in loans and advances is mainly attributable to further advances of approximately R22 million to the Corporation's housing and estate companies to meet expenditure on home ownership and housing schemes for employees and further loans of approximately R22 million to the Corporation's mining companies to assist them to finance their capital extensions.

Current assets and liabilities

The value of 'Stocks and work-in-progress' increased by R137 015 000 from R258 274 000 at 30 June 1975 to R395 289 000 at 30 June 1976.

Approximately 53% of this increase is attributable to a planned increase in consumable stores and plant spares to provide for the requirements of new plants being built under the vast extension schemes. The remainder can be attributed to higher production costs and the considerable escalations in the purchase price of raw materials and stores stocks.

The increase of R28 739 000 in 'Debtors' in comparison with the previous year is mainly due to increases in selling prices of products.

'Creditors' at 30 June 1976 reflects an increase of R31 258 000 as compared with the previous year. This is directly attributable to the increased tempo both in the production area and extension schemes, a contributing factor being increased prices and a build-up in retention monies.

Directorate

There was no change in the Corporation's directorate during the year under review. The names of the directors holding office at 30 June 1976 and at the date of this report are set out on page 1.

Income Statement

for the year ended 30 June 1976

	Notes	1976 R000	1975 R000
Turnover		**799 005**	627 253
Profit from trading	2	**51 342**	49 239
Dividends received	3	**7 768**	2 455
Profit on sale of investments		**117**	297
		59 227	51 991
Provision for writing down an investment		**1 627**	—
Financing charges	4	**87 657**	87 865
Loss for year		**30 057**	35 874

Balance Sheet

at 30 June 1976

	Notes	1976 R000	1976 R000	1975 R000	1975 R000
Source of capital employed					
Share capital	5		**515 200**		325 200
Distributable reserves	6		**357 664**		338 259
Shareholders' interest			**872 864**		663 459
Fixed period loans	7		**1 868 706**		1 285 700
			2 741 570		1 949 159
Employment of capital					
Fixed assets	8		**2 208 937**		1 638 132
Interests in controlled and associated companies	9		**269 922**		226 147
Loan portion of taxation			**1 014**		974
Current assets					
Stocks and work-in-progress	10	**395 289**		258 274	
Debtors		**137 668**		108 929	
			532 957		367 203
			3 012 830		2 232 456
Current liabilities					
Creditors		**231 761**		200 503	
Bankers and short-term loans	11	**6 125**		59 277	
Import/export schemes	12	**338**		(2 238)	
Shareholders for dividends		**16**		16	
		238 240		257 558	
Provisions					
Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses, self-insurance and sundry contingencies		**33 020**		25 739	
			271 260		283 297
			2 741 570		1 949 159

Notes on the Financial Statements

1. Accounting policies

This summary of the principal accounting policies of the Corporation is presented to assist in the evaluation and appreciation of the annual financial statements in which these policies have in all material respects been followed.

1.1 Constitution

The Corporation is constituted in terms of the Iron and Steel Industry Act, 1928 (as amended). This act stipulates that the Companies Act, 1973 or any amendment thereof does not apply to the Corporation.

1.2 Turnover

Turnover represents the invoiced sales value (excluding any import or export levies) of all products sold on the local and export markets.

1.3 Depreciation

Depreciation of fixed assets used in production is calculated on a straight line basis at a rate determined by the expected life of each individual type of asset. Should a particular asset continue in use after completion of its anticipated life, depreciation continues to be raised at the same rate. Conversely, where an asset is retired before the expiry of its anticipated life, depreciation ceases to be raised. The original cost of the redundant or obsolete asset is written off against accumulated depreciation and not against income. The proceeds from sales of fixed assets are credited to accumulated depreciation. No depreciation is provided on properties, leases and rights.

1.4 Increased replacement cost of fixed assets

In addition to depreciation, a charge based on the current wholesale price index is made to production costs to provide for the estimated increased replacement cost arising in a particular year of operation.

1.5 Provisions

Furnace reconditioning, renewal of short-life assets, extraordinary operating expenses and self-insurance are provided for by charges to production costs. When expenditure in respect thereof is incurred, such expenditure is charged against these provisions.

1.6 Pre-production expenditure — new mining development

As a result of the extensive expenditure on new mining development at Sishen North Mine and Grootegeluk and in keeping with recognised mine accounting practice, pre-production financing charges have been capitalized with effect from 1 July 1974 (see note 4). Pre-production expenditure consists of waste stripping costs, direct administrative project costs as well as financing charges which will be written off over the life of the mine or 20 years whichever is the lesser period.

1.7 Financing charges

'Financing charges' represents the net cost of financing which consists mainly of interest paid on fixed period loans, reduced by interest received as well as financing charges on new mining development and the Sishen-Saldanha scheme. The interest rate used to calculate the financing charges capitalized in respect of the pre-production expenditure on new mining development and the allocation to the Sishen-Saldanha scheme is based on the Corporation's average borrowing rate for the year under review.

'Financing charges' includes the cost of acquiring loans, differences resulting from foreign currency conversions, costs and commissions arising from forward exchange purchase contracts, discounts on the issue price of bonds, management fees and other expenses incurred on receipt or renewal of loans, which are charged when incurred.

1.8 Site preparation

During the current year expenditure amounting to R3 897 000 (1975—R11 097 000) in respect of site preparation for extensions was capitalized and, together with similar expenditure capitalized with effect from 1 July 1973, is shown under a separate asset head — 'Site preparation'. The intention is to write this expenditure off against future profits over a limited period.

1.9 Steel used on capital extensions

No adjustment is made for profit arising on steel manufactured by the Corporation, sold at arm's length to the trade and subsequently used by contractors on the Corporation's capital extensions.

1.10 Foreign currency conversions

Loans and suppliers credit repayable in foreign currencies and secured by forward exchange purchase contracts are converted into South African currency at the fixed rates of exchange applicable to the respective forward exchange purchase contracts.

Loans and suppliers credit repayable in foreign currencies and not secured by forward exchange purchase contracts are converted into South African currency at rates of exchange ruling at balance sheet date.

Current assets and current liabilities in foreign currencies are converted into South African currency at rates of exchange ruling at balance sheet date.

1.11 Stocks and work-in-progress

Finished products and work-in-progress are valued at current standard costs including labour, materials, manufacturing and direct overhead costs.

Raw materials and consumable stores are valued at current purchase price.

Plant spares are valued at current purchase price less provision for obsolescence and depreciation. Rolls and moulds are valued at cost less a charge for usage and obsolescence.

Appropriate provision has been made where the above stock values are considered to exceed net realisable values.

The bases of valuation of stocks and work-in-progress are consistent with those of prior years and the aggregate book value is below cost.

1.12 Deferred and current taxation

Based on present forecasts and current tax legislation, the Corporation will not be liable for taxation in the foreseeable future. Accordingly no provision is made for taxation deferred by reason of accelerated allowances on fixed assets nor has provision been made for current taxation.

	1976 R000	1975 R000
2. Profit from trading	**51 342**	49 239
— after providing for		
Depreciation of fixed assets	**67 105**	50 864
Reserve for increased replacement cost of fixed assets	**49 495**	34 281
Furnace reconditioning and renewal of short-life assets	**13 490**	9 903
Extraordinary operating expenses	**5 047**	5 952
Self-insurance	**2 602**	1 435
3. Dividends received		
Listed shares	**1 975**	1 757
Unlisted shares	**5 793**	698
	7 768	2 455
4. Financing charges		
Net financing charges	**87 657**	87 865
— after the deduction of		
Interest received from controlled and associated companies	**9 805**	6 601
Other interest received	**3 431**	6 019
Allocation to Sishen-Saldanha scheme (see note 8(iii))	**33 105**	14 664
Financing charges capitalized — new mines (see note 1.6)	**12 773**	3 598
	59 114	30 882

	1976 R000	1975 R000
5. Share capital		
Prescribed by Iron and Steel Industry Act, 1928 (as amended)		
500 000 A shares of R2 each	1 000	1 000
500 000 000 B or preference shares of R2 each	1 000 000	706 000
	1 001 000	707 000
Authorized, issued and fully paid		
500 000 A shares of R2 each	1 000	1 000
256 880 364 B shares of R2 each	513 761	323 761
219 636 7½% cumulative preference shares of R2 each	439	439
	515 200	325 200
The unissued B or preference shares may be issued by the Board at not less than par and under such conditions as the State President may approve, provided that present holders of B shares shall have the first right to subscribe for such additional shares.		
6. Distributable reserves		
Reserve for increased replacement cost of fixed assets		
Balance at beginning of year	216 105	181 824
Charged to production costs	49 495	34 281
Balance at end of year	265 600	216 105
General reserve	194 000	194 000
Accumulated loss		
Balance at beginning of year	(71 846)	(35 939)
Loss for year	(30 057)	(35 874)
Dividend on 7½% cumulative preference shares	(33)	(33)
Balance at end of year	(101 936)	(71 846)
Total distributable reserves	357 664	338 259
7. Fixed period loans	1 868 706	1 285 700
Loans repayable in foreign currencies which are not secured by forward exchange purchase contracts amount to R92 042 000 (1975—R67 206 000). Of this amount R53 475 000 (1975—R40 458 000) is payable in United States dollars and R38 567 000 (1975—R26 748 000) in British Sterling.		

	1976 R000	1975 R000
8. Fixed assets		
Properties, leases and rights	**37 732**	36 536
Buildings and works	**552 625**	473 488
Machinery, plant and furnaces	**1 094 332**	900 074
Site preparation	**36 389**	32 492
Total cost	**1 721 078**	1 442 590
Depreciation	**417 190**	356 619
	1 303 888	1 085 971
Extensions under construction — at cost	**905 049**	552 161
Net book value	**2 208 937**	1 638 132
Depreciation at beginning of year	**356 619**	313 609
Charged to production costs	**67 105**	50 864
	423 724	364 473
Redundant or obsolete assets written off	**6 534**	7 854
Depreciation at end of year	**417 190**	356 619

(i) Fixed assets amounting to R8 227 000 (1975—R5 591 000) have been erected on property of companies wholly-owned by the Corporation.

(ii) An amount of R3 968 000 (1975—R3 530 000) included under 'Buildings and works' is in respect of a hostel for Bantu employees of the Corporation which has been erected on leasehold property in the South African Bantu Trust area. This amount represents the cost of the hostel buildings erected in terms of the leasehold agreement.

(iii) 'Extensions under construction' includes expenditure of R454 858 000 (1975—R247 504 000) on the Sishen-Saldanha scheme. This expenditure includes an allocation of financing charges amounting to R50 524 000 (1975—R17 419 000). The scheme is being undertaken and financed by the Corporation as authorized in terms of Acts 28 and 29 of 1973.

9. Interests in controlled and associated companies		
Listed shares — at cost (market value 30 June 1976 — R23 069 000; 1975—R22 972 000)	**24 890**	24 389
Unlisted shares — at cost less provision for writing down an investment	**53 391**	55 488
Loans and advances		
Due to Corporation	**198 795**	154 554
Due by Corporation	**(7 154)**	(8 284)
	269 922	226 147
Comprises interests in-		
Companies whose operations form part of the main functions of the Corporation	**247 805**	203 222
Companies with investments in the iron, steel, engineering and allied fields	**22 117**	22 925
	269 922	226 147

	1976 R000	1975 R000
10. Stocks and work-in-progress less provisions — in the aggregate below cost		
Finished products	44 553	22 181
Work-in-progress	91 874	80 133
Raw materials	32 585	25 219
Plant spares	93 310	52 475
Consumable stores	80 182	52 226
Rolls and moulds	52 785	26 040
	395 289	258 274
11. Bankers and short-term loans — Net amounts due to financial institutions.	6 125	59 277
12. Import/export schemes		
Steel import scheme	4 796	(5 563)
Tinplate scheme	(5 845)	—
Iron and steel export scheme	1 387	3 325
	338	(2 238)

The above schemes are administered by the Corporation on behalf of the Department of Industries.

13. Contingent liabilities

The Corporation has —

(i) guaranteed the principal sum and interest on loans to its housing and estate companies	35 150	38 750
(ii) guaranteed a loan of US $3 500 000 from a bank in the United States to Iskop (Proprietary) Limited, a company in which the Corporation has a 50% interest. The amount drawn at 30 June 1976	3 051	594

It is not anticipated that the Corporation will be called upon to fulfil either of the above obligations.

14. Capital commitments

(i) Contracts entered into for		
— Extensions	186 000	341 000
— Sishen-Saldanha scheme	86 000	100 000
(ii) Authorized expenditure for which there are no negotiated contracts		
— Extensions	109 000	110 000
— Sishen-Saldanha scheme	41 000	110 000

Capital expenditure will be financed from share issues, loans and funds generated by the Corporation from normal operations.

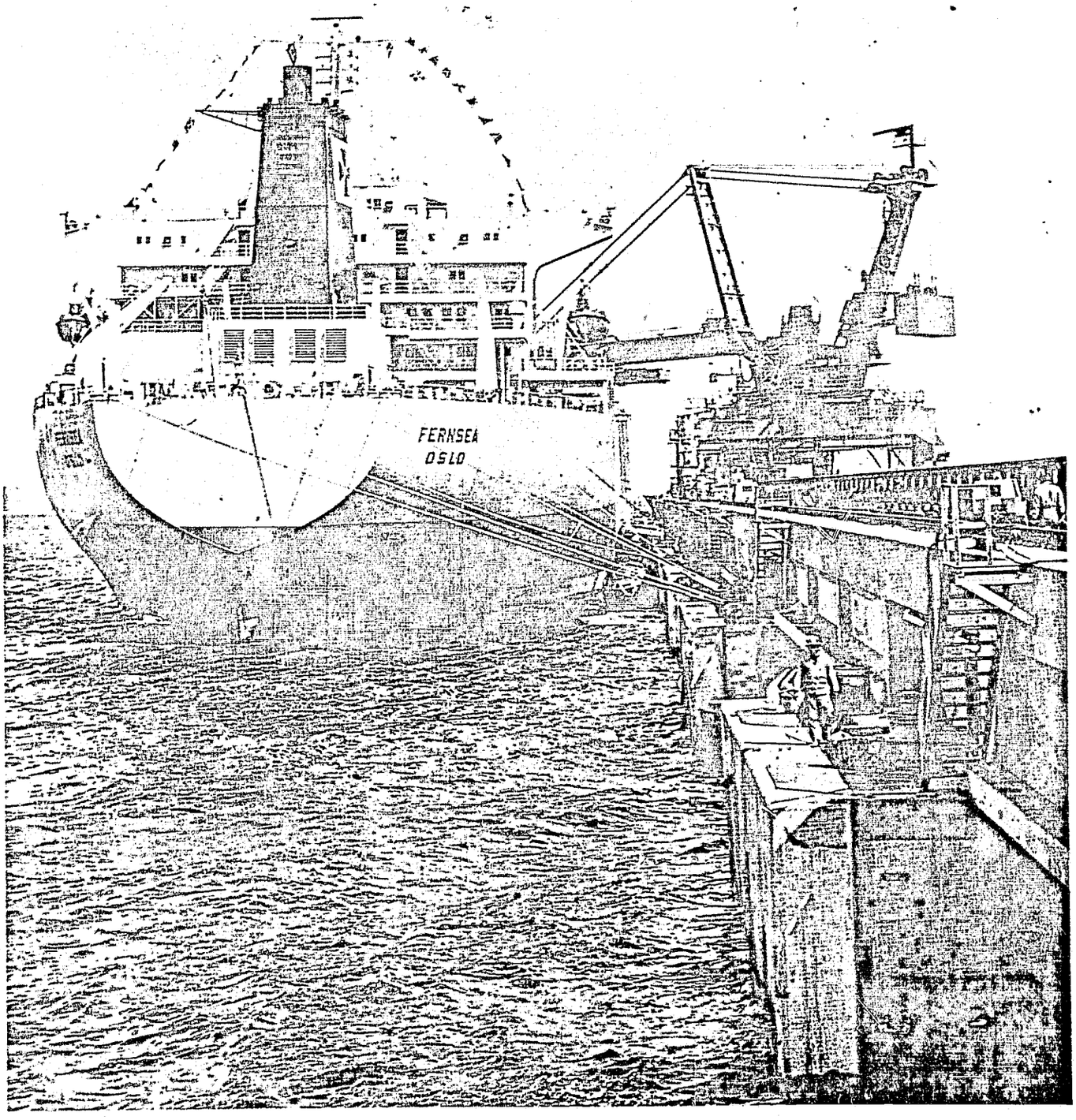
15. Comparative figures

Certain figures relating to 1975 have been restated in order to reflect appropriate comparisons with those of 1976.

Statement of Source and Application of Funds

for the year ended 30 June 1976

	R000
Source of funds	
Profit before financing charges	57 600
Depreciation	67 105
Increased replacement cost of fixed assets	49 495
Funds from normal operations	174 200
Increase in share capital	190 000
Increase in fixed period loans	583 006
	947 206
Application of funds	
Acquisition of fixed assets	637 910
Increase in interests in controlled and associated companies	43 775
Financing charges	87 657
Dividend on 7½% cumulative preference shares	33
Increase in working capital	177 831
	947 206


FERNSEA
OSLO

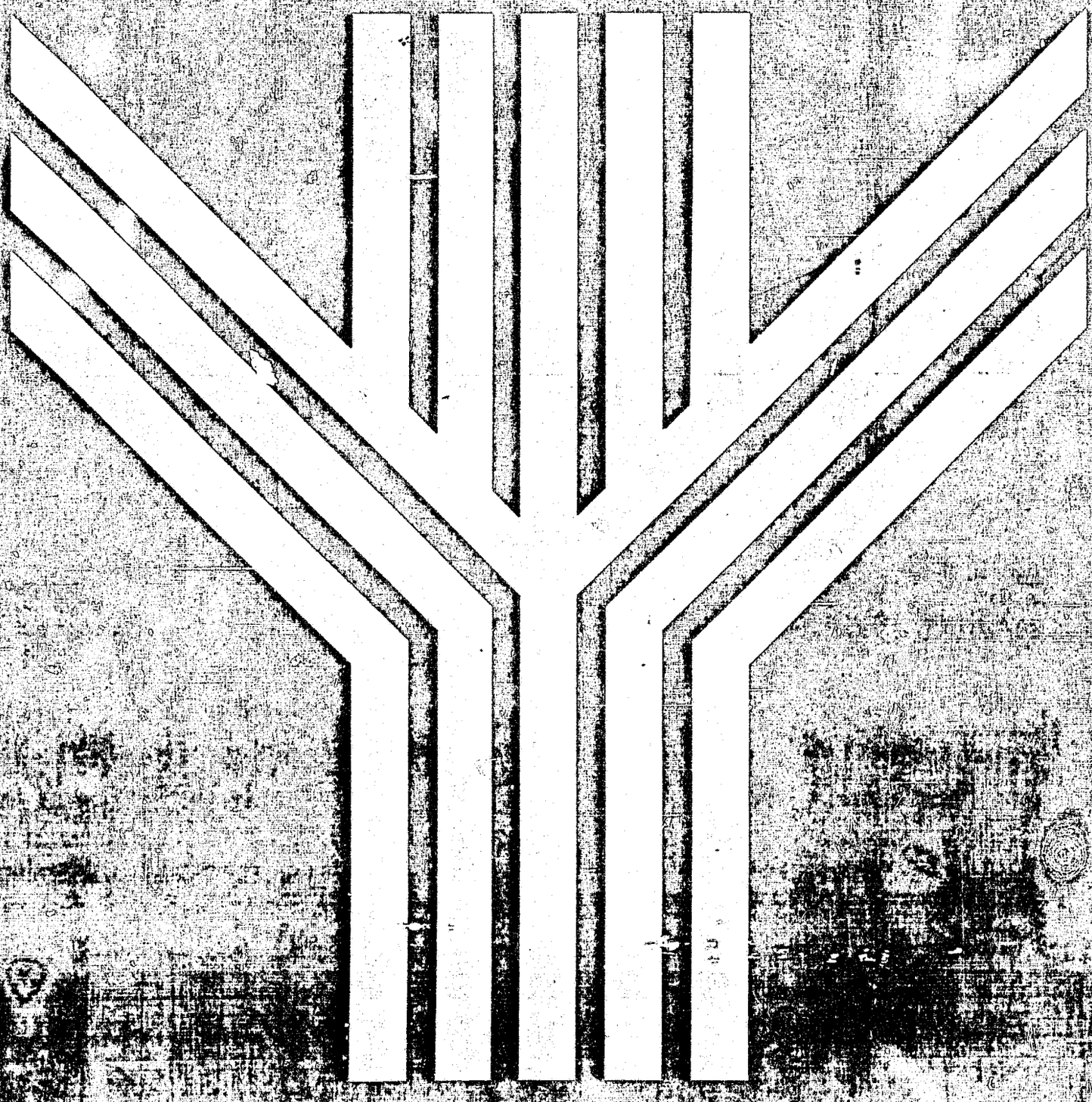
Description	1976	1975	1974	
Raw materials consumed (tons):				
Iron ore (including fine ore for sintering)	**6 704 700**	6 228 700	5 968 200	
Coking coal	**5 112 400**	4 684 100	3 980 700	
Other coal	**443 200**	460 900	478 000	
Dolomite (raw)	**1 114 000**	1 041 600	1 036 400	
Production (tons):				
Ingot steel	**4 678 900**	4 349 700	4 036 500	
Continuously cast blooms	**497 200**	306 200	20 200	
Sales (tons):				
Prime steel products*	**3 587 700**	3 346 300	3 135 500	
Pig iron	**318 200**	413 300	684 700	
Coke oven by-products	**223 300**	188 700	140 800	
Operating results:	**R**	R	R	
Net sales revenue	**766 456 000**	601 860 000	444 840 000	372
(Loss)/net profit before tax	**(30 057 000)**	(35 874 000)	(37 603 000)	3
Taxation:	**—**	—	—	
Financial:				
Source of capital employed:				
Share capital	**515 200 000**	325 200 000	195 200 000	165
Distributable reserves	**357 664 000**	338 259 000	339 885 000	355
Fixed-period loans	**1 868 706 000**	1 285 700 000	814 824 000	439
Current liabilities and provisions	**271 260 000**	283 297 000	220 324 000	108
	3 012 830 000	2 232 456 000	1 570 233 000	1 069
Employment of capital:				
Fixed assets				
in operation — at cost less depreciation	**1 303 888 000**	1 085 971 000	737 609 000	363
under construction — at cost	**905 049 000**	552 161 000	381 001 000	311
Investments	**270 936 000**	227 121 000	179 169 000	149
Current assets	**532 957 000**	367 203 000	272 454 000	245
	3 012 830 000	2 232 456 000	1 570 233 000	1 069

*Excluding off-cuts and scrap.

An ore carrier, on its maiden voyage from Norway, being loaded with the first Sishen export iron ore to be shipped from Saldanha Bay at the end of September 1976 for a destination in Europe.

1974	1973	1972	1971	1970	1969	1968	1967
968 200	5 593 000	5 668 800	4 905 800	4 073 300	4 231 100	4 086 400	4 021 500
980 700	3 840 800	3 806 800	3 644 400	3 173 800	3 162 100	3 141 900	3 099 200
478 000	471 000	424 600	444 600	433 700	407 900	460 900	480 400
036 400	1 002 200	1 006 700	886 300	631 700	584 800	636 200	598 900
036 500	4 052 700	3 816 300	3 478 400	3 384 900	3 350 400	3 194 600	2 858 400
20 200	—	—	—	—	—	—	—
135 500	2 968 200	2 659 000	2 638 200	2 676 400	2 483 600	2 249 100	2 114 900
684 700	827 700	846 900	650 200	100	144 200	152 700	299 100
140 800	145 100	144 500	154 500	158 500	147 300	151 500	130 300
R	R	R	R	R	R	R	R
340 000	372 819 000	304 067 000	291 470 000	238 480 000	219 862 000	199 382 000	186 851 000
303 000)	3 954 000	9 538 000	19 520 000	15 040 000	19 074 000	16 218 000	22 727 000
—	—	619 000	4 946 000	5 781 000	9 933 000	6 854 000	8 904 000
200 000	165 200 000	145 200 000	125 200 000	95 200 000	85 200 000	85 200 000	70 200 000
885 000	355 987 000	341 252 000	330 644 000	316 130 000	305 276 000	296 573 000	286 732 000
824 000	439 693 000	175 134 000	138 583 000	65 615 000	32 839 000	18 000 000	—
324 000	108 905 000	100 793 000	72 827 000	85 693 000	53 402 000	50 336 000	57 760 000
233 000	1 069 785 000	762 379 000	667 254 000	562 638 000	476 717 000	450 109 000	414 692 000
609 000	363 075 000	332 662 000	308 799 000	288 060 000	231 862 000	235 791 000	204 396 000
001 000	311 577 000	87 214 000	37 140 000	28 970 000	31 630 000	12 478 000	31 347 000
169 000	149 623 000	142 172 000	131 774 000	127 126 000	79 553 000	64 733 000	57 080 000
454 000	245 510 000	200 331 000	189 541 000	118 482 000	133 672 000	137 107 000	121 869 000
233 000	1 069 785 000	762 379 000	667 254 000	562 638 000	476 717 000	450 109 000	414 692 000

ISCOR
ANNUAL REPORT 1974



South African Iron and Steel Industrial Corporation, Ltd

(Constituted and Incorporated by Act of Parliament in the Republic of South Africa)

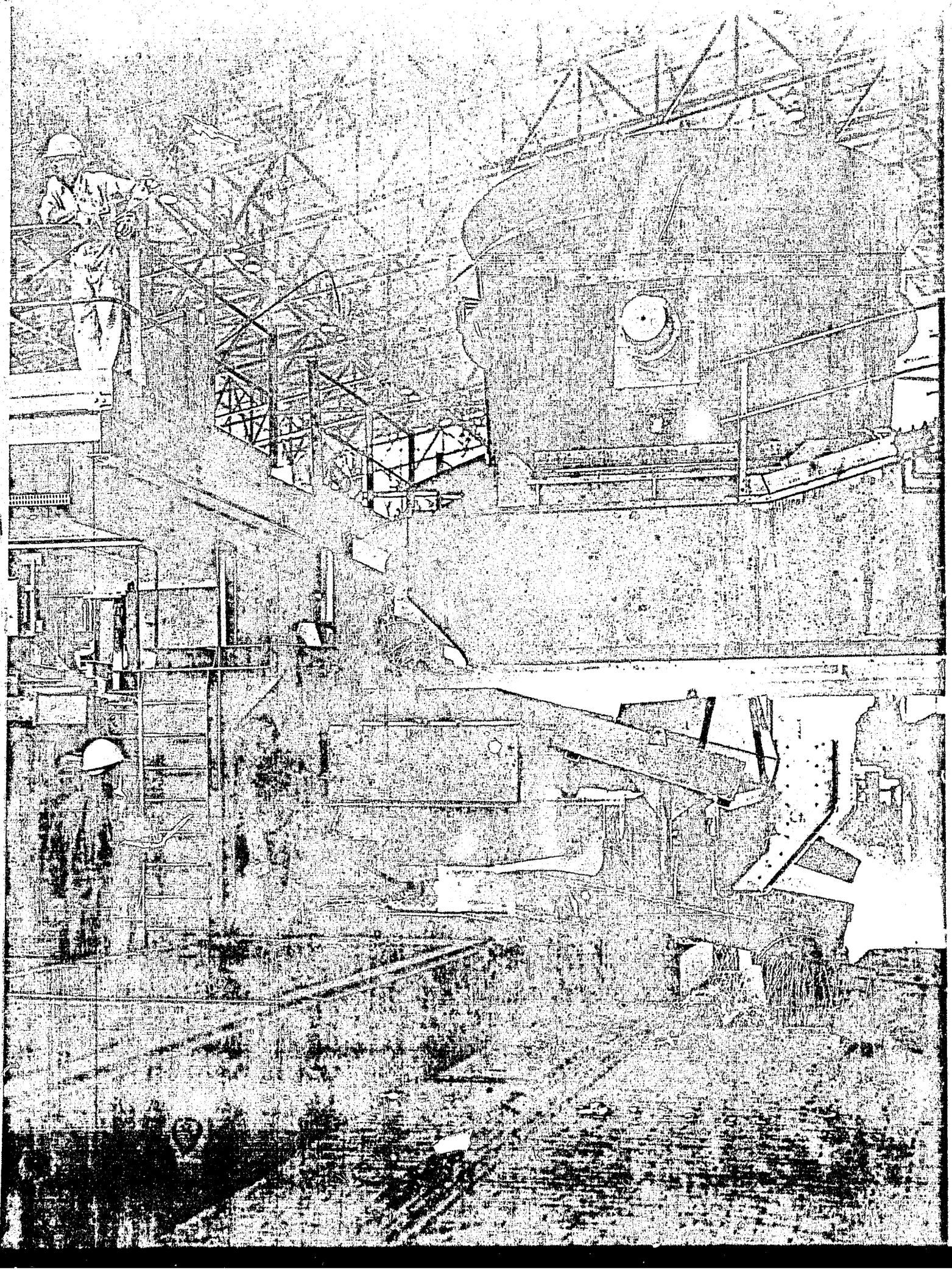
Board of Directors

Dr. T.F. Muller, Chairman
Mr. J.P. Coetzee (Managing)
The Hon. J.F.W. Haak
Mr. P.K. Hoogendyk
Dr. J.P. Kearney
Mr. J.J. Kitshoff
Dr. M.D. Marais
Prof. H.J. Samuels
Mr. J.J. Vermooten

Management

Mr. J.P. Coetzee, Managing Director
Mr. K.R. Rümelin, General Manager
Mr. L. Duncker, Divisional General Manager (Mining and Supplies)
Mr. H.C.H. Hutten, Divisional General Manager (Iscor Outside Interests – Technical)
Mr. C.N. Lawrance, Divisional General Manager (Iscor Outside Interests – Financial)
Mr. P.A. Olivier, Divisional General Manager (Domestic Marketing)
Mr. P.J.C. Pretorius, Divisional General Manager (International Marketing)
Mr. L. van Zyl, Divisional General Manager (Finance and Business Services)
Mr. P.N. Basson, Deputy Divisional General Manager (Production)
Mr. J.P. de Vos, Deputy Divisional General Manager (New Development)
Mr. G.J. Botha, General Project Manager, Sishen-Saldanha Project
Mr. L.C.J. de Villiers, Corporate Manager (Personnel)
Mr. H.C. Jerling, Public Relations Manager
Adv. J.J.M. Naudé, Group Secretary and Law Adviser

(Hierdie verslag is ook in Afrikaans beskikbaar)



Notices of Meetings

Annual General Meeting of Private Shareholders

Notice is hereby given that the annual general meeting of private shareholders (holders of B shares or preference shares) of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, on Wednesday, 27 November 1974, at 9.00 a.m. for the following business:

1. To nominate an auditor in accordance with Section 14(1) of Act No. 11 of 1928, as amended.
2. To elect three directors in terms of Section 3(1)(b) of Act No. 11 of 1928, as amended.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

Iscor Headquarters
P.O.Box 450
Pretoria 0001
6 November 1974

By order of the Board
J.J.M. Naudé
Group Secretary

Forty-Fifth Annual General Meeting

Notice is hereby given that immediately after the annual general meeting of private shareholders convened for 9.00 a.m. on Wednesday, 27 November 1974, the annual general meeting of shareholders of the South African Iron and Steel Industrial Corporation, Limited, will be held in the Iscor Headquarters Building, Pretoria, for the following business:

1. To receive the balance sheet and report of the directors for the year ended 30 June 1974.
2. To transact such other business as may be transacted at an annual general meeting of shareholders of the Corporation.

Proxies must be deposited at the Head Office of the Corporation not less than forty-eight hours before the meeting.

Iscor Headquarters
P.O.Box 450
Pretoria 0001
6 November 1974

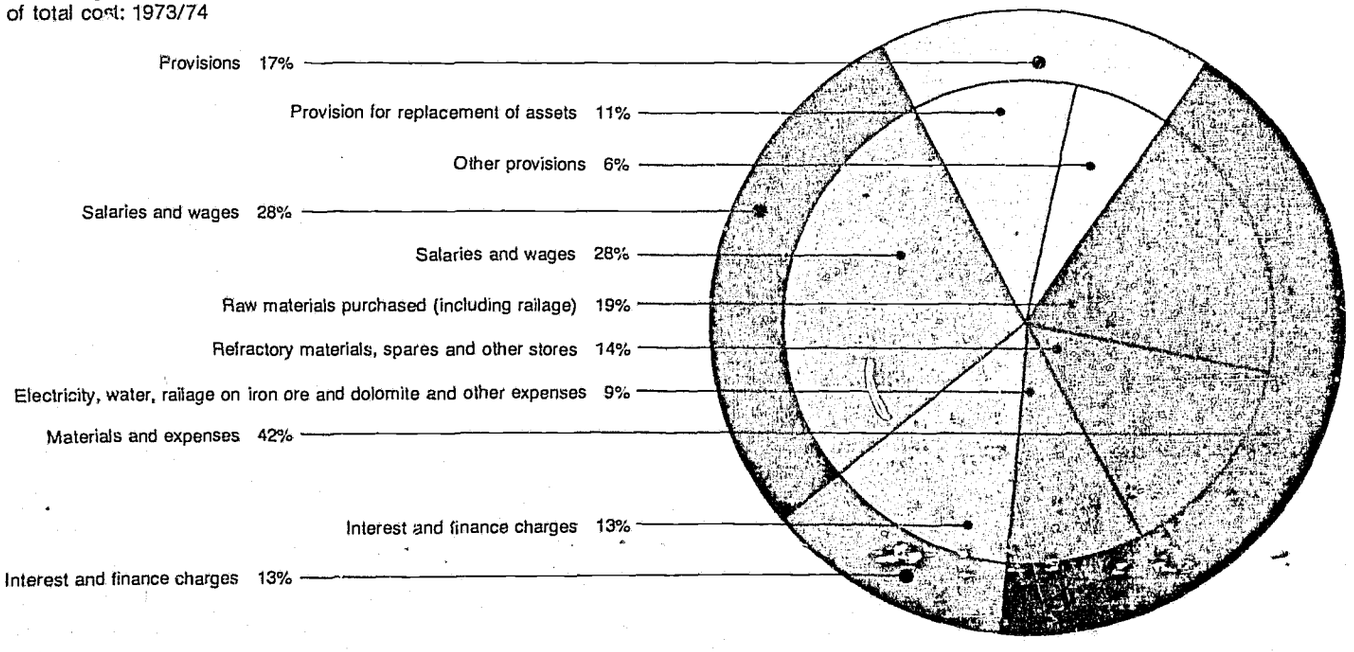
By order of the Board
J.J.M. Naudé
Group Secretary

Molten steel being discharged into the tundish of a continuous bloom-casting machine at the Newcastle Works.

At a glance

(Figures rounded off to nearest thousand)	1974	1973
Total assets	R1 570 233 000	R1 069 785 000
Loss (−)/net profit before taxation (+)	−R37 603 000	+R3 954 000
Sales (net value)	R444 840 000	R372 819 000
Iron ore dispatched from mines	6 036 000 tons	5 409 000 tons
Steel production: Ingots	4 037 000 tons	4 053 000 tons
Continuously cast blooms	20 000 tons	—
Salary and wage costs	R145 200 000	R116 700 000
Planned expansion	1983/84: 11,3 million tons of liquid steel per annum.	
	1976: Export of iron ore through Saldanha Bay to commence.	

Percentage distribution of total cost: 1973/74


Provisions 17%
Provision for replacement of assets 11%
Other provisions 6%
Salaries and wages 28%
Salaries and wages 28%
Raw materials purchased (including railage) 19%
Refractory materials, spares and other stores 14%
Electricity, water, railage on iron ore and dolomite and other expenses 9%
Materials and expenses 42%
Interest and finance charges 13%
Interest and finance charges 13%

Statement by the Chairman

To the Shareholders

The audited financial statements for the year ended 30 June 1974 show that the Corporation's net assets amount to more than R1 344 million – an increase of some R383 million over the figure for the previous year.

This increase in net assets was once again financed mainly from loan capital, as a result of which net finance charges increased from R20 750 000 in 1973 to R52 599 000 for the financial year under review.

After taking this high cost of financing into account, the income statement for the year reflects a loss of R37 603 000 (1973 – R3 954 000 profit).

However, the increase in financing charges is not the only factor that contributed to the loss since the Corporation once again, as a result of the high rate of inflation, experienced rises in production costs over which it had no control. Moreover, the price increase granted for absorbing cost increases became effective only on 5 June 1974. The Corporation furthermore continued with its policy of providing for the increased replacement cost of fixed assets – a provision which is based on the increase in the wholesale price index. The above loss is arrived at after charging R21 626 000 against trading results (1973 – R14 420 000) for the "Reserve for increased replacement cost of fixed assets".

Financing

During the financial year, R504 496 000 was spent on extensions at works and mines, the replacement of obsolete equipment, provision of housing and housing loans for employees and the continuation of the construction work on the Sishen-Saldanha Bay project. These items, as well as the sources from which financing was obtained, are later dealt with more fully in this report and in the cash-flow statement, published under the heading "Source and application of funds".

During the financial year, 15 million B shares of R2 each were issued to the State President at par. In terms of an existing arrangement with the Government, as already mentioned in previous statements, the Government would contribute R20 million annually up to 1980/81 towards increasing Iscor's share capital. However, the Government has agreed to make these contributions available over a shorter term, and under this new arrangement a further R10 million was received from the Government in June 1974, and a further 85 million B shares, with a total value of R170 million, will be taken up over the next two financial years. Of this amount, R130 million will be made available during the 1974/75 financial year, which will mean that approximately 20 per cent of Iscor's outside financing requirements for the coming financial year will be met by increasing its share capital. This is an important contribution towards financing, which helps to keep Iscor's debt ratio as low as possible.

In order to effect these increases in issued share capital, it has been necessary to increase the share capital laid down by the Iron and Steel Industry Act, 1928. This amendment of the Act, in terms of which Iscor's total prescribed capital was increased from R251 million to R707 million, was passed by Parliament in September 1974.

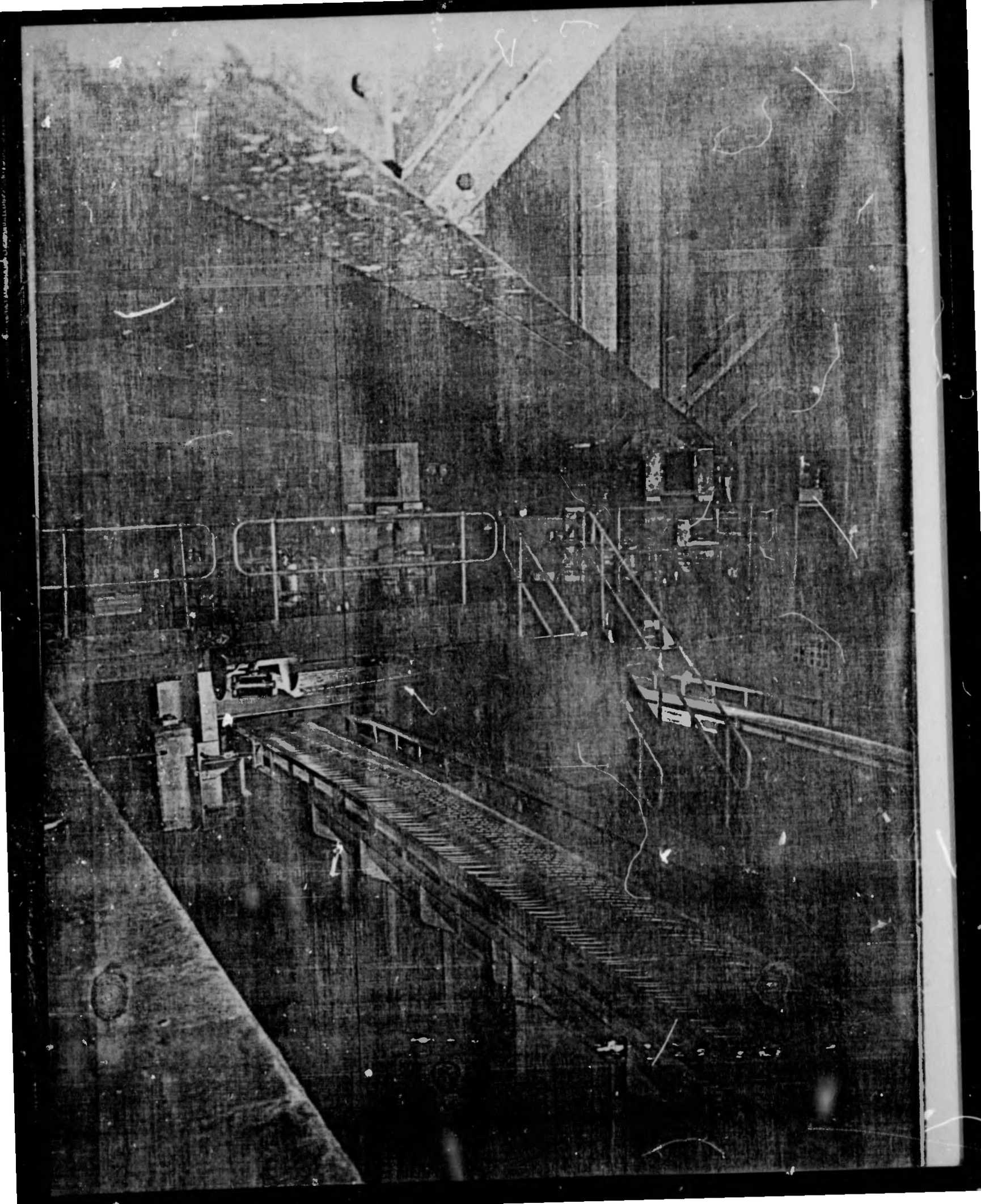
Loans to the amount of R210 million were taken up during the year in the local as well as foreign capital markets. Local registered Iscor stocks have been approved since 1970 as a prescribed investment for insurance companies and pension funds, but in October 1973 the Registrar of Financial Institutions also approved these stocks as a prescribed investment for banks, building societies and unit trusts. Iscor stocks are not exempted from the payment of stamp duties or marketable securities tax by investors, and for issues made since the beginning of 1974, Iscor itself undertook to pay such stamp duties and tax. The result is that the yield on new Iscor stock issues which, depending on marketing conditions, continue to be offered on a regular basis in the local market, will in future be comparable in all respects with that of other institutions which are not subject to this cost.

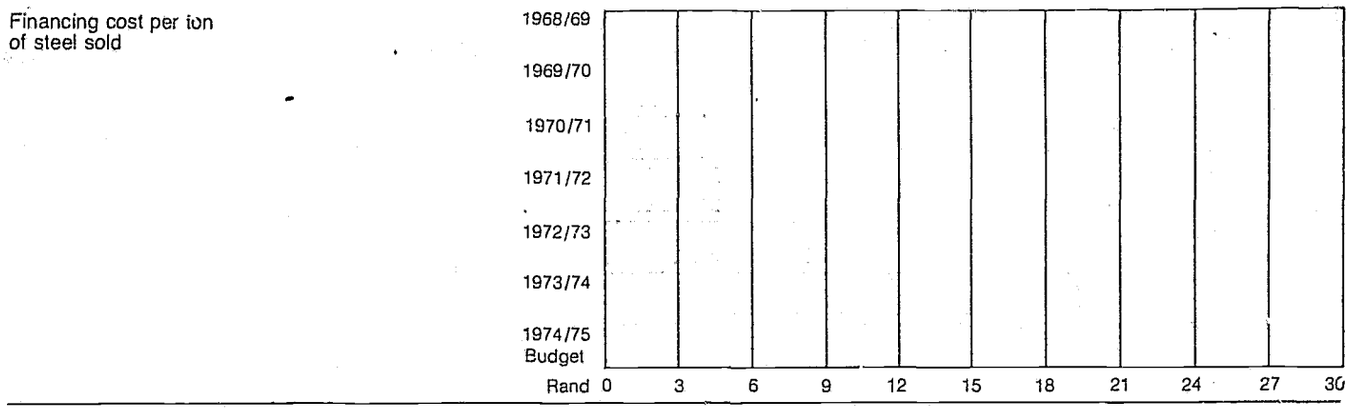
Last year it was mentioned that the availability of loan capital in the local market is relatively limited in the light of the total domestic demand for capital. The availability of money in this market has been further hampered in recent times by the rapid rate of inflation, which results in investors, in the expectation that long-term interest rates would continue to climb, preferring to invest on short-term, particularly because in many cases short-term rates are at present somewhat higher than long-term rates.

As in the past, and where economically acceptable, use was again made of supplier's credit and other forms of project financing offered by suppliers of capital goods. Arrangements made during the financial year resulted in an amount of R323 million being made available for financing from this source. Of this amount, R227 million will be applied for the financing of contracts in respect of the Sishen-Saldanha Bay project. Since this type of financing is coupled with payments to be made in terms of contracts, its utilization depends on the progress made with such contracts. The effect of the above arrangements will therefore be felt mainly in the 1974/75 and following financial years. As a result of these arrangements and others made in previous financial years, an amount of R170 million was utilized from this source during the past financial year.

No large lump sum loans were repayable during the financial year. Redemption by instalments, effected in the normal course of business in terms of existing loans and supplier's credit agreements, amounted to approximately R10 million.

As far as foreign financing is concerned, it should be stated that factors such as the constant uncertainties about international monetary policies, the oil crisis, world-wide high rates of inflation, the large losses suffered by overseas banks on currency transactions and the consequent stricter monetary control imposed by central banks to curtail credit, currency flow





and currency speculation, resulted in loan funds having been less readily available and also more expensive than in the past. Furthermore, availability is detrimentally affected because some major industrial countries are showing large balance of trade deficits and are consequently among the largest borrowers in the limited available markets.

Provisional arrangements have already been and are still being made to meet as far as practicable that part of Iscor's financing requirements which has to be supplemented from foreign funds.

The rapid rate of expansion again maintained during the financial year, is the reason why revenue from existing production units is burdened with the high financing costs of production units under construction, or those in the running-in stage, which therefore make no or only a small contribution towards internal cash flow. In addition, the Corporation, like all other industries, has to face continually rising production and other costs. These costs could not be fully countered by higher productivity and the increase in the steel price by an average of 9 per cent, approved by the Government with effect from 11 May 1973. The net steel price increase of 21,6 per cent on average, approved with effect from 5 June 1974 by the Government, was purposely introduced at so late a stage in order to make an active contribution towards combating inflation. This increase has had no material effect on profitability during the financial year, since it was applicable for only 26 days.

The effect of all these factors has been that the Corporation suffered a net loss of R37,6 million during the financial year after provision was made for net financing costs to the amount of R52,6 million. On the other hand, however, the Corporation was able to supply approximately 200 000 tons more steel to the local market than in the 1972/73 financial year. If the present expansion programme had not been undertaken, this tonnage would have had to be imported. Owing to the vast difference between the current domestic price of steel and that of the imported product, it would have cost the country about R20 million more to import the 200 000 tons of steel. This amount would, in turn, have had to be recovered from the steel consumer by means of the import levy pool. Therefore, although the Corporation is showing a considerable loss, the country as a whole, and the steel consumer in particular, was saved an additional cost of approximately R20 million in only one year, and the outflow of foreign currency to the amount of about R40 million was prevented. With due consideration of the additional share capital of R30 million taken up by the Government, the loss of approximately R37 million and the creation of reserves as part of production costs, the shareholder's equity increased by about R14 million.

Last year it was pointed out that the Government, in order to keep the domestic sales price of steel to a minimum, went so far as to waive its requirement of the payment of a dividend, which would have amounted to R7,5 million in respect of that year. It may now be stated that the Government has again, for the same reason, waived a dividend on the A and B shares for the 1973/74 financial year, which, if it had had to be paid out, would have amounted to R8,8 million. Meanwhile, as a result of the low domestic price of steel, no earnings on shareholder's equity in respect of the financial year are available for plough-back.

Although South African industry in general cannot but appreciate very highly this attitude on the part of the Government, it is obvious that such concessions cannot continue indefinitely. The Government, like any other shareholder, is entitled to a normal return on its investments, particularly in a case such as that of the steel industry where investment represents risk capital by any standard. If it does not receive that return, it cannot be expected to invest further amounts in such industry. It would mean, however, that on the longer term a constant steel shortage would occur – with the resultant need for steel imports at steadily rising prices. Future increases of domestic sales prices to make provision for inevitable cost increases, appear to be essential for the foreseeable future. It is expected that, with the inclusion of the Sishen-Saldanha Bay project, Iscor's capital expenditure on extensions, replacement and housing would amount to approximately R612 million for the 1974/75 financial year. This expenditure will again be financed mainly from loan funds, and it will mean that, together with the factors already mentioned which may have a detrimental effect on financing costs, the total cost of external financing will show a considerable increase in the 1974/75 and following financial years.

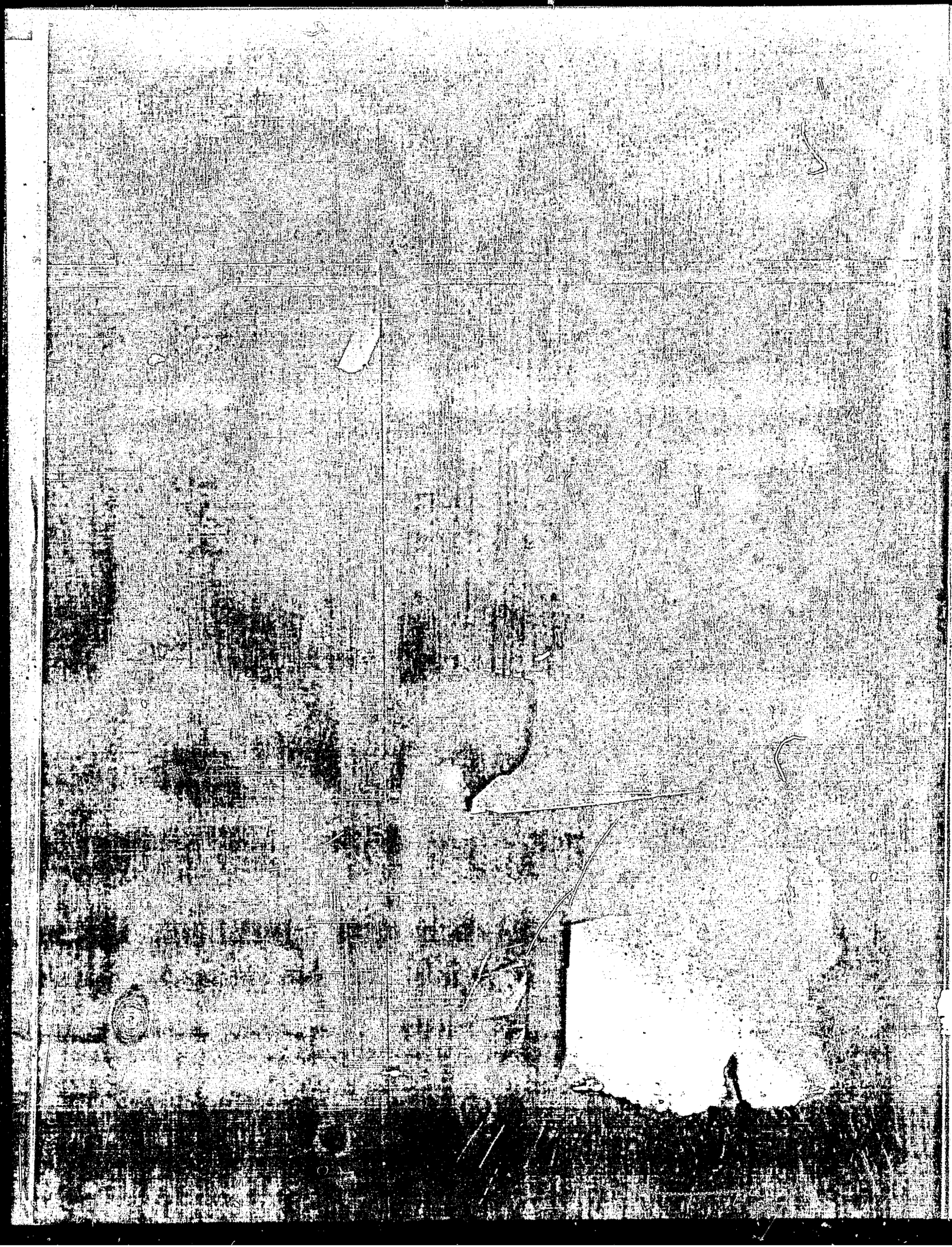
Productivity improvement

Despite several unfavourable factors, Iscor's labour productivity is nevertheless showing a significant improvement. Expressed in terms of ingot production per man-hour in respect of the two older works and Headquarters, it has improved by almost 30 per cent since 1961. (The Newcastle Works has not been included in the calculation since it commenced its steel production only recently.)

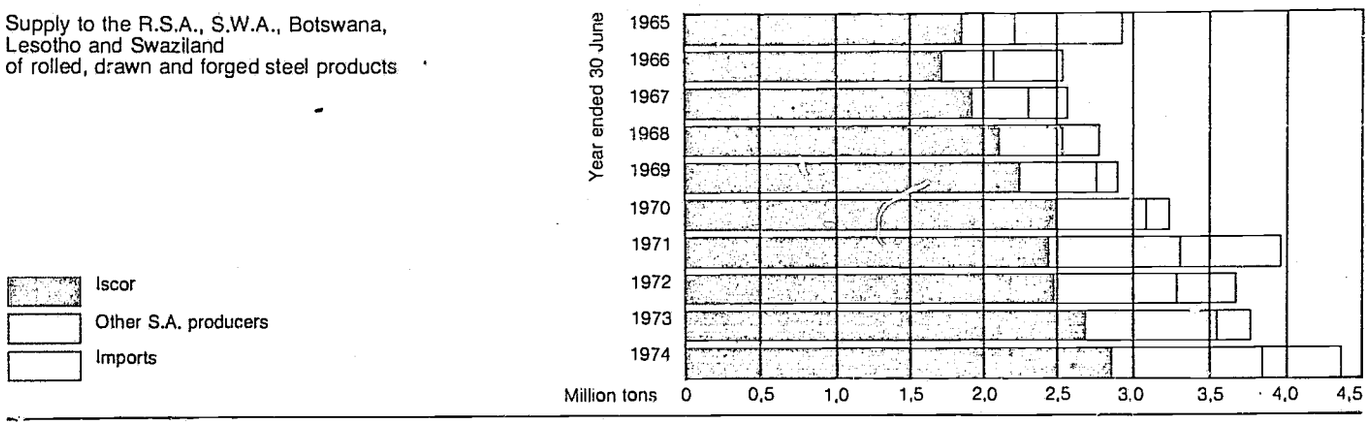
This achievement has been attained notwithstanding high labour turnovers whilst, in addition to production, attention has had to be given simultaneously to modernization and large-scale extensions, coupled with increasing quality requirements and variations in product ranges. Mechanization and automation are introduced wherever economically possible.

The improvement in labour productivity must be ascribed in part to the replacement and/or improvement of existing production units, as a result of which the various plants inherently became more productive. Production at the Pretoria Works, where actually no production plants have been added to the existing blast furnaces and steel melting plant since July 1960, has nevertheless been increased by more than 60 per cent. The works could achieve this improvement on account of its relatively stable White labour force. This again emphasizes the fact that productivity improvement is largely dependent, apart

The exit end of No. 2 rod mill, Pretoria Works.



Supply to the R.S.A., S.W.A., Botswana, Lesotho and Swaziland of rolled, drawn and forged steel products



from modernization, on the availability of experienced workers.

On the whole, improved productivity of labour as well as of equipment and materials has made a very real contribution towards keeping production costs, and hence also the price of steel, as low as possible.

Iron and steel production

The total blast furnace production amounted to 4 110 425 tons, compared with 3 981 660 tons for the previous year, representing an increase of 128 765 tons, or 3,2 per cent. To this total the Vanderbijlpark, Pretoria and Newcastle Works contributed 2 060 594, 1 365 401 and 617 268 tons of liquid iron, respectively, whilst 67 162 tons of liquid ferro-manganese were produced by the Newcastle Works.

The joint liquid iron production of 4 043 263 tons, used for pig iron and the production of steel, represents an increase of 128 762 tons, or 3,3 per cent, over the comparative figure for the previous year. Ferro-manganese production was virtually the same as the year before.

Ingot steel production totalled 4 036 513 tons, which was slightly less than the figure for the previous year. To this total the Vanderbijlpark, Pretoria and Newcastle Works contributed 2 677 630, 1 351 925 and 6 958 tons, respectively. In addition, the latter works produced 20 189 tons of continuously cast blooms direct from molten steel.

Sales and marketing

Sales

The net sales value of all products sold during the year amounted to R444 839 836, as compared with R372 819 325 in the previous financial year. The tonnages and net sales value, f.o.r. works, for the various product groups were as follows:

Product	Tons	Sales value f.o.r. works R
Steel products	3 196 075	416 935 989
Pig iron, iron ore and miscellaneous	3 646 276	34 707 602
Coke oven by-products	140 819	6 190 069
Total	6 983 170	457 833 660
Less: Settlement discount, etc.		12 993 824
Net sales value		444 839 836

The total tonnage and the net sales value represent an increase of 1,6 and 19,3 per cent, respectively, over the figures for the previous financial year. The tonnage and sales value of steel products sold, show an increase of 6,3 and 22,2 per cent, respectively, in comparison with the previous year.

As from 5 June 1974 the steel price was increased by a weighted average of R27,50 per ton (21,6 per cent), as a result of which the sales value, f.o.r. works, increased by approximately R6 100 000 up to the end of June 1974.

Exported products were included in the sales figures, whilst those imported by the Corporation on behalf of customers were not taken into account.

Sales of steel products

The following is an analysis of steel sales according to broad product groups:

Product group		Tons
Semis		63 300
Profile products:		1 075 500
Structural sections, bars and coiled rounds	472 800	
Rails and fishplates	263 300	
Wire rod and wire	332 100	
Forgings	7 300	
Flat products:		2 057 300
Plates	553 800	
Uncoated sheet	671 700	
Strip	240 800	
Galvanized sheet	366 300	
Tinplate and blackplate	224 700	
Total		3 196 100

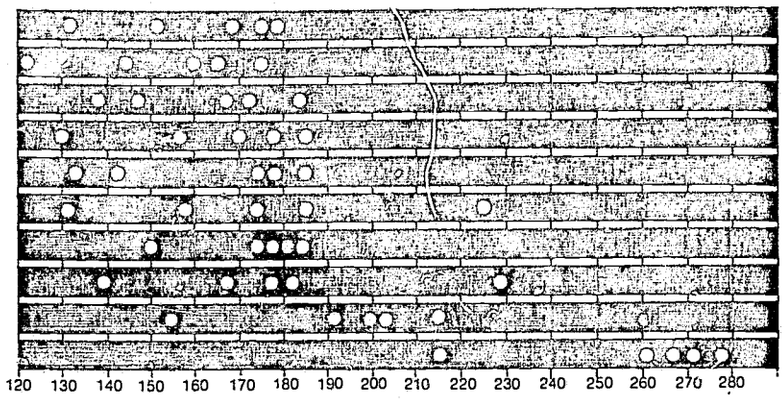
The above figures include 71 557 tons of steel products with a sales value, f.o.r. works, of R8 438 966, used by the Corporation for its own extensions.

Tapping an electric arc furnace at the Vanderbijlpark Works

Comparison of domestic prices of representative steel products in the R.S.A. and certain overseas countries on 15 July 1974

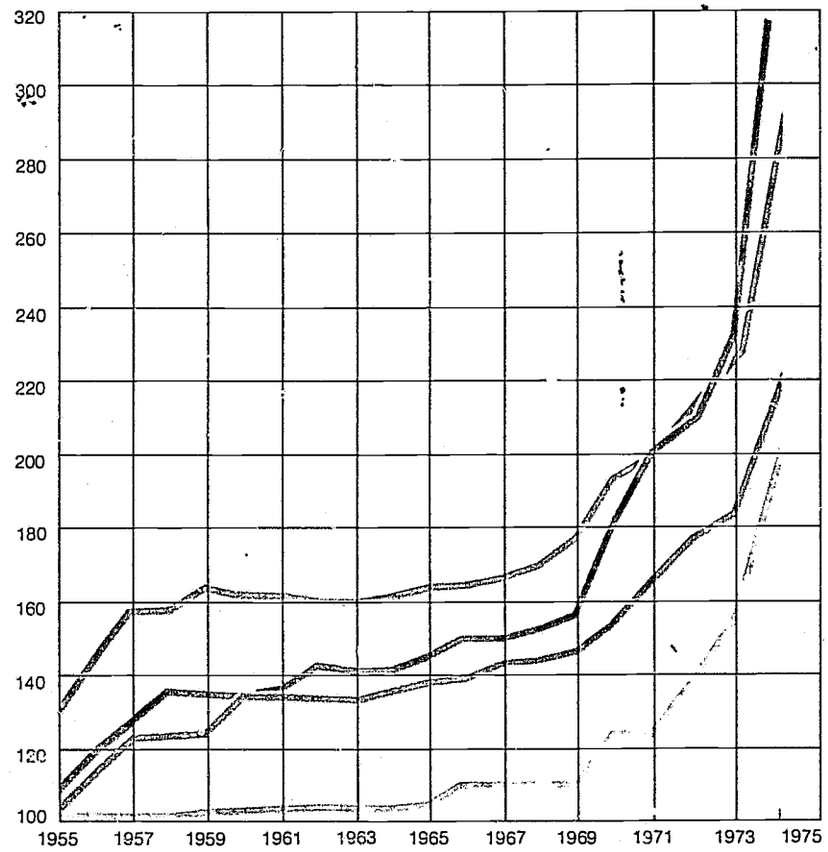
Iscor
Australia
France
U.K. (BSC)
U.S.A.
West Germany

Angles
76 × 76 × 6,4 mm
Joists
203 × 152 mm
Rounds
90 mm dia
Channels
102 × 51 mm
Flats
150 × 12 mm
Plates
12 mm thick
Hot-rolled strip
4 mm thick
Hot-rolled sheet
2,5 mm thick
Cold-rolled sheet
1,6 mm thick
Galvanized flat sheet
0,6 mm thick
Price in rand per metric ton

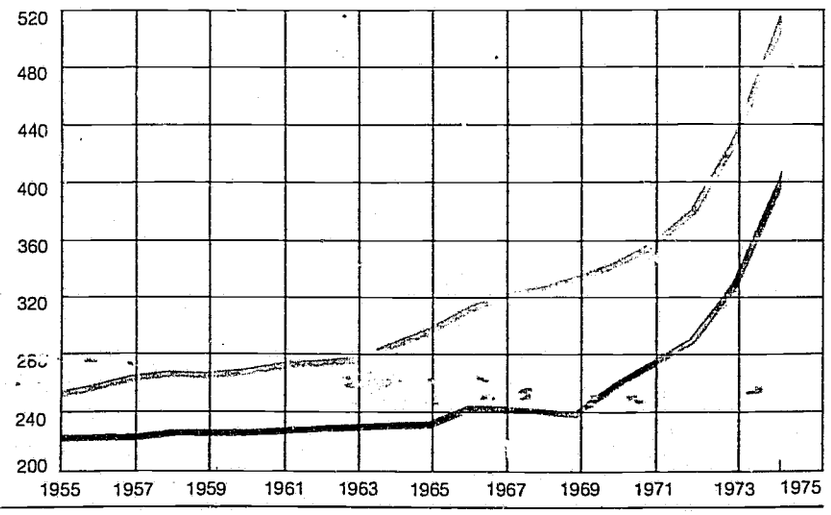


Price index of steel products in various countries

1955: Iscor price = 100



Price index – Basis: 1939 = 100



Share of the market

During the year an estimated total of 4 609 500 tons of rolled, drawn and forged steel products from South African and overseas sources was supplied to consumers in the Republic, South West Africa and neighbouring African states. This represents an increase of approximately 639 400 tons, or 16,1 per cent, compared with the adjusted total of 3 970 100 tons supplied during the previous year.

Of the 4 609 500 tons, Iscor supplied 66,4 per cent and other South African producers 22,1 per cent, whilst 11,5 per cent was imported. The comparative adjusted percentages for the previous year were 72,0, 22,5 and 5,5, respectively.

Of the tonnage obtained from South African sources, the Corporation supplied 75,1 per cent and other steel producers 24,9 per cent, compared with 76,2 and 23,8 per cent, respectively, for the previous financial year.

Demand

Owing to the favourable local economic climate and a number of large extension projects which are being undertaken in the Republic, the demand for all primary steel products again far exceeded the available local production capacity during the past financial year. Although the Corporation, after consultation with the other South African rolled steel producers to maximize local production, attempted to supplement the shortage by means of imports, it could not been possible, owing to the world-wide shortage of steel, to purchase sufficient supplementary stocks abroad.

This fact, together with the long delivery times for steel products which could be imported, was the reason why it had not always been possible to meet the increased requirements of all customers timeously and in full. The Corporation was therefore obliged, as in the past, to apportion the available steel from own production and imports to customers on a strict allocation basis. Contractual obligations and the fixed ordering pattern of customers were always considered in these allocations and the acceptance of orders. The serious shortage experienced during the first half of 1974, hit especially the consumers of plate, hot and cold-rolled sheet, medium sections and wire rod. However, an improvement in the position is expected by the end of 1974, when reasonably large quantities of steel from overseas sources will be delivered to customers, if nothing unforeseen happens.

According to the latest indications, the increased demand will, on account of the steel requirements for a number of large projects, such as the Sishen-Saldanha Bay ore export scheme, the Richards Bay railway line and harbour complex, Escom power stations and extensions at the Iscor works, continue at least to the end of the 1974/75 financial year. This means that in some cases local production will still have to be supplemented by imports, particularly as regards hot-rolled sheet, plate, wire rod and rails for the South African Railways, as well as certain medium products.

A gradual flattening in the demand for galvanized and cold-rolled sheet is expected by the end of 1974 and the beginning of 1975 as a result of declining activity in the building and motor-car industries. In addition, the commissioning of several new production units at both the Newcastle and the Vanderbijlpark Works as from 1975 will bring further relief in the supply position in respect of a wide range of steel products.

Prices

The price of steel products was increased by about 25 per cent net, or R32,50 per ton, as from 5 June 1974. However, this amount included an increase of R5,00 per ton net in the existing import levy. This means that the portion of the increase accruing to the Corporation amounted to R27,50 per ton net, or a weighted average of 21,6 per cent. Because the Corporation's prices were rationalized during the previous general price increase in May 1973, both the basis prices and the extras were adjusted by 21,6 per cent and rounded off as follows: basis prices to the nearest 50 cents, quality extras to the nearest 25 cents and all other extras to the nearest 5 cents. These adjustments were effected to maintain the mutual price relationships between product groups and between the various items within each group, which existed since rationalization. It also contributed to the fact that the price pattern, in comparison with overseas price differentials, was maintained, as is evident from the diagram on page 10.

Notwithstanding the fact that this increase represents the largest single adjustment in respect of primary steel products in the Republic up to now, the domestic steel prices, compared with overseas domestic prices, continue to be amongst the lowest in the world, as is also evident from the relevant diagram. If regular price adjustments were to be effected at shorter intervals in the future, they could be of a smaller magnitude, and industries should be able to adapt to them continually without financial disruption.

In the past the Corporation obtained the approval of the Department of Industries to effect periodic adjustments to the prices of galvanized products in accordance with variations in the purchase price of zinc metal. Approval was also obtained during the financial year for similar adjustments in respect of tinplate, for which coating extras can be revised half-yearly on the strength of fluctuations in the purchase price of tin metal. These more regular adjustments have become necessary as a result of the latest increases in the price of tin metal, especially if it is borne in mind that the purchase price of tin metal rose by R3 100 a ton (98 per cent) over the past financial year.

Imports

The total tonnage of rolled, drawn and forged steel products, excluding semis for rerolling, imported during the financial year, amounted to 531 000, as compared with the adjusted 218 000 tons for the previous year. This increase of 313 000

tons resulted mainly from the rise in the local demand for all steel products. Of the steel products imported during the financial year, Iscor obtained approximately 440 000 tons in terms of the general levy and import subsidy scheme on behalf of customers.

The expected imports of steel products by Iscor on behalf of customers for the latter half of 1974 amount to approximately 508 000 tons. A large proportion of this tonnage was ordered for delivery during the first half of 1974, but on account of shipping and other problems delivery was delayed to the second half of the year.

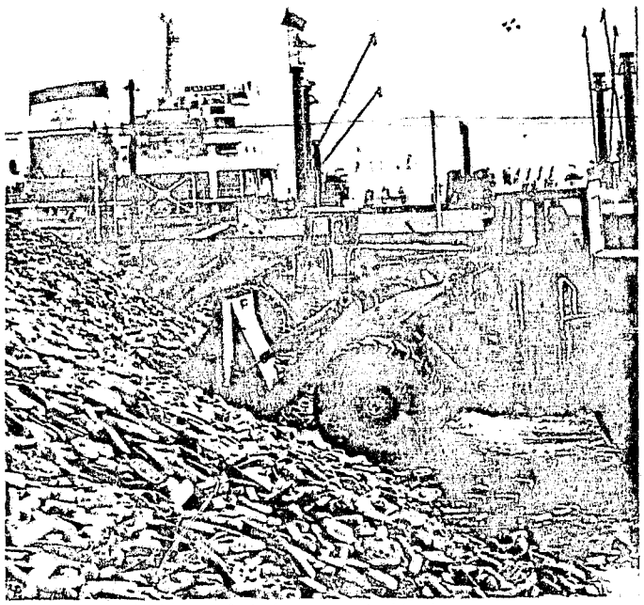
Owing to the commissioning of a number of the Corporation's new production units, a marked decline in steel imports is expected from the second quarter of 1975. According to present estimates only about 196 000 tons of steel, excluding semis for rerolling, will be imported in the first half of 1975, and approximately 65 000 tons during the second half.

Since the general price increase in June this year, the levy on dispatches of South African and imported steel products destined for the domestic market, has been increased from R2,20 per ton to R7,35 per ton gross. At the end of the financial year there was a debit balance of about R35 790 000 in respect of the steel import scheme, as shown in the balance sheet. This amount represents the bridging financing provided by Iscor. As from 1 April 1974, the long-term financing of the general levy and import subsidy scheme is done by the Government.

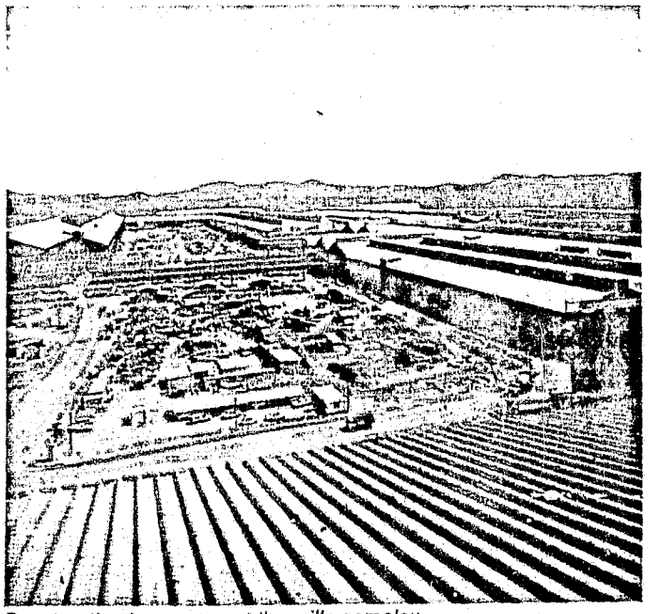
In view of the raising of the levy from R2,20 to R7,35 per ton, and with due regard to the expected further imports of steel, it is foreseen that at the increased rate of levy, it will be possible to terminate the steel import scheme only by 1980.

It may be necessary to increase the rate of levy in the near future in order to liquidate the debit balance in the scheme account by, say, 1978.

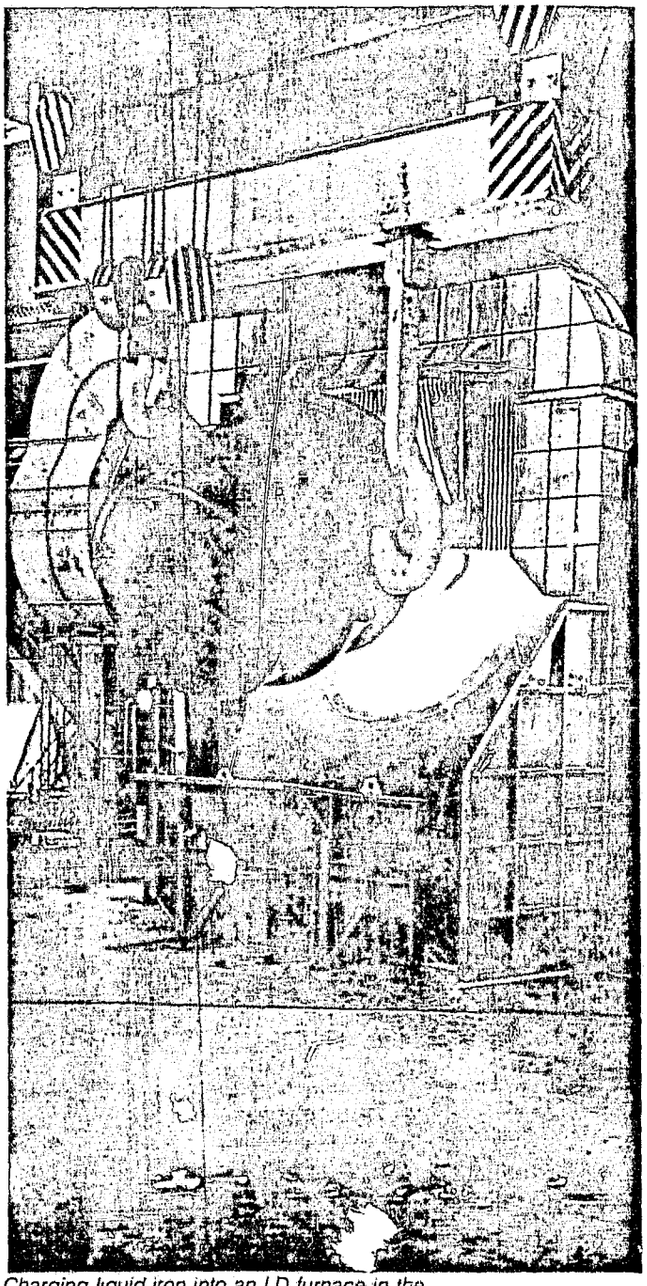
The iron and steel export scheme, which is administered by



Shipping the last load of pig iron exported to Japan under a ten-year contract.



Construction in progess at the mills complex, Newcastle Works.



Charging liquid iron into an LD furnace in the steel-melting plant at the Newcastle Works.

Iscor on behalf of the Department of Industries, and to which all local steel producers contribute by collecting a levy of R1,00 per ton on steel sales, reflects a credit balance of R4 296 000.

Marketing of Usco's steel products

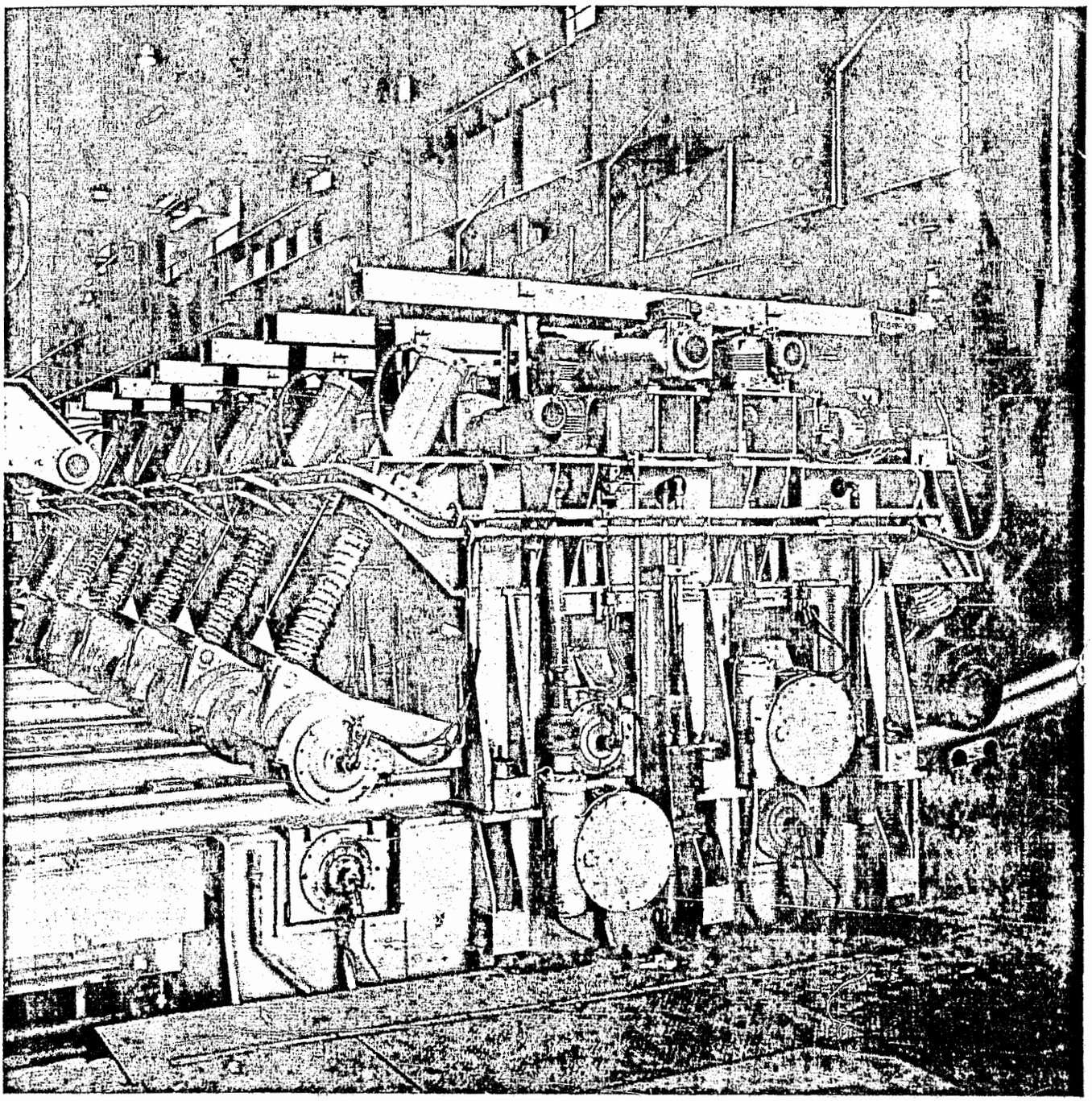
The marketing of Usco's steel products has been undertaken by Iscor on a service tariff basis since July 1973. A comprehensive rationalization and standardization programme, affecting the product ranges and price lists, was carried out in conjunction with Usco, and its orders are at present integrated with those of Iscor through a common computer system to obtain the greatest possible advantages for both organizations from rationalization of rolling programmes.

Exports

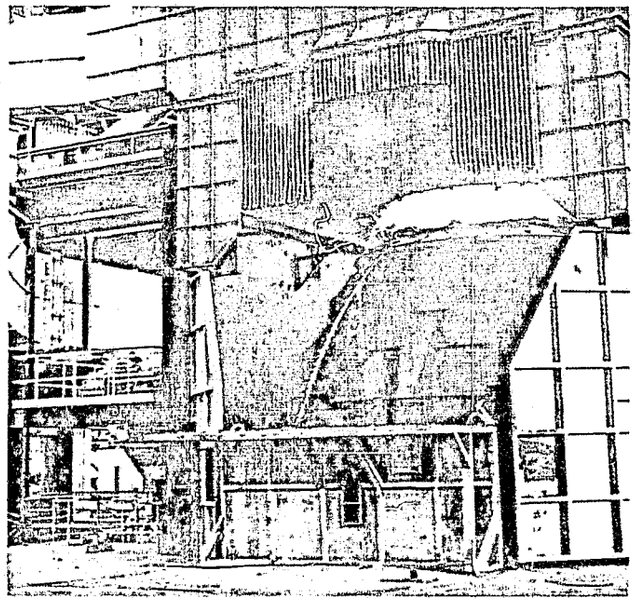
In accordance with the Corporation's policy of annually supplying a limited tonnage of steel to established foreign markets and customers, 135 300 tons of rolled steel products were exported to overseas countries during the financial year. In addition, 314 300 tons of pig iron and 509 900 tons of iron ore were exported. The total earnings from exports during the year amounted to R28,2 million.

As the modernization and expansion programme advances and large production units are commissioned at the three works, a surplus of certain steel products should occur at times, which may then be available for export.

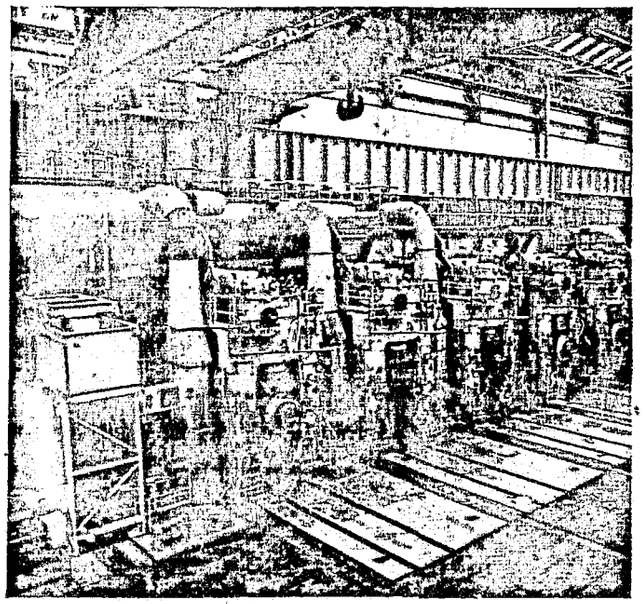
The ten-year contract for the supply of pig iron to the Nippon Steel Corporation of Japan, originally concluded by Amcor, expired in August 1974. This contract earned a total of R142 million in foreign currency for the Republic. No. 4 blast furnace at the Newcastle Works, which had been mainly responsible for the production of this pig iron, has since then been supplying liquid iron to the steel melting plant of that works.



Continuous casting of blooms at the Newcastle Works.



An LD furnace in operation at the Vanderbijlpark Works.



The new 2 050 mm hot-strip mill at the Vanderbijlpark Works.

Iscor-Iran Company Limited

Iscor and Iranian interests recently established a joint company in Iran for the marketing of Iscor steel, as well as steel purchased in the international markets, and for possible further processing, such as the manufacture of barbed wire and profiled galvanized sheet.

Extensions

The object of the Corporation's comprehensive modernization and extensions at its three works is to satisfy, in the long term, the Republic's requirements in respect of the main steel products. On the one hand, no provision has been made in the production planning for periods when a peak demand may unexpectedly occur, but on the other rather for the continuous exportation of small tonnages of steel in order that contact with markets abroad may be maintained with a view to selling periodic and inevitable surpluses which will arise. In addition, it is essential that pace be kept with the latest marketing trends and technological development in the field of iron and steel production, which may lead to the modernization or replacement of existing production units.

The present long-term plan for expansion and modernization extends to 1983/84. The object of this is that the Corporation's total annual capacity in the terminal year should amount to 11,3 million tons of liquid steel. To this figure the Vanderbijlpark, Newcastle and Pretoria Works will contribute 5,5 million, 4,1 million and 1,7 million tons a year, respectively.

The estimated capital expenditure of R3 240 million for the period from July 1973 to June 1984 is at present R740 million more than the amount stated last year, because the expansion plan has now been extended by one year to June 1984 and because recalculations of the costs of capital goods and construction work had to be made. The extensions at the seven mining centres, which have to supply the additional raw materials for the increased iron and steel production, are included in this capital amount, but not the capital requirements for the ore export scheme. The cost of the proposed semis works, which is planned for erection at Saldanha Bay in conjunction with overseas interests, is also excluded, since its financing will be undertaken jointly by the partners.

The capital estimates for the Pretoria Works are still based on the planned extensions which would have taken place at Kwaggasrand but which now cannot be proceeded with owing to the pollution objections lodged against the plan. The intention is at present to carry out these extensions in the vicinity of Rosslyn, north-west of Pretoria. Owing to the higher cost of the connection with the existing works, the cost of establishment on that site will be much higher than it would have been in the case of Kwaggasrand.

Newcastle Works

This third works of Iscor produced its first liquid steel in March 1974, two years and some days after the first steel column was erected on the bare veld.

The first 50 of 200 coke ovens were lit at the end of 1973, and at present there are 100 in operation. The last of the remaining 100 ovens will start production at the end of 1975. Upon completion of the whole coke-ovens project, the costs involved will amount to approximately R70 million.

As was stated last year, a new blast furnace was ordered for this works at a total cost of R58 million, and if nothing unforeseen happens, it will be commissioned, together with its ancillary equipment, in January 1976. Since this blast furnace will use a high percentage of sinter in its charge, a sinter plant with a capacity of 6 400 tons of sinter per day has been ordered at a cost of R20 million.

The first of the three LD steel furnaces started producing in March 1974 – as was mentioned above – and the second in May 1974. The furnaces, each with a capacity of 150 tons, had a combined cost of R65 million. Together with the first two LD furnaces, the first two of three continuous bloom-casting machines were commissioned. The third LD furnace will come into production by January 1976. In addition to the two existing continuous bloom-casting machines, a third is now under construction, as well as a continuous slab-casting machine. The latter will supplement the slab shortage at the Vanderbijlpark Works. The total cost of the continuous casting complex is put at R50 million.

The R40 million billet mill is also in operation, whilst the bar mill of R60 million will be commissioned by the end of 1974. The rod mill of R50 million and the first phase of the medium mill, which will cost R73 million, will be commissioned in March and June 1975, respectively. The wire-drawing and galvanizing plant, with an annual capacity of 87 000 tons, which was erected at a cost of R12 million, will commence production by the end of 1974.

Vanderbijlpark Works

A considerable increase in the production of coke and coke-oven gas at this works is foreseen as a result of three new batteries presently under construction at a combined cost of R45 million. The first two will be commissioned in April and July 1975, respectively, and the third in 1977. Together with that of the existing five, the coal throughput of the coke-ovens will then be increased from the present 5 700 to 9 000 tons per day.

The production of the fourth blast furnace at this works, which was built at a cost of R32 million, is still not satisfactory, since it is hampered by an inadequate blower capacity. This shortcoming will persist until such time as the new blower comes into operation in 1975.

Two new LD furnaces, built at a combined cost of R40 million, are at present in production at this works. Their performance is so satisfactory that open-hearth furnaces Nos. 1 and 2 could be decommissioned. This fact contributed towards a considerable reduction in air pollution at this works, since the LD furnaces are equipped with gas-cleaning plants.

The computer-controlled 2 050 mm hot-strip mill of R110 million and a shearing line for wide hot-rolled sheet were put into operation at the end of the financial year. The second and last phase of the construction programme should be completed by 1977. A decoiler, which was coupled to an existing shearing line at the beginning of 1974, makes it possible at present to produce the narrower plate widths more efficiently by coiling them at the 2 050 mm hot-strip mill and subsequently slitting the product into the required lengths on the shearing line.

Construction work on the 1 850 mm cold-mill complex, the total cost of which amounts to R120 million, is proceeding according to plan and should be completed in May 1975. It is intended to modernize the existing 1 220 mm cold mills, annealers, shearing lines and galvanizing plants. This will not only increase the capacities of the various units by about 20 per cent, but it will also be possible to meet the quality requirements of customers more fully when these parts of the modernization programme have been completed in 1977.

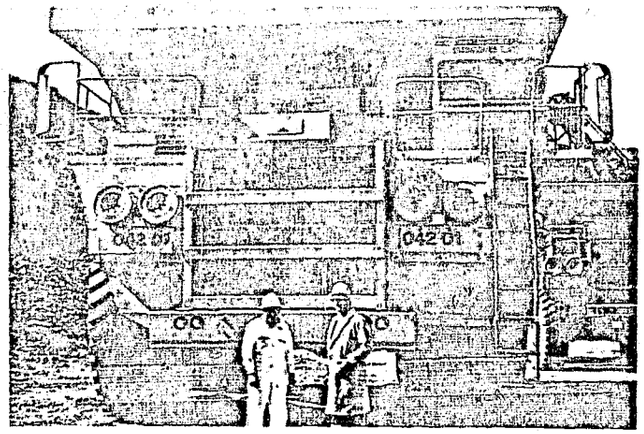
A continuous coil coating plant, with a capacity of 108 000 tons a year, has been ordered at a cost of R5 million and should be commissioned in August 1976. Apart from coloured sheet for roofing, the Corporation will then also be able to supply the secondary industry with either prepainted or plastic-laminated sheet of a particularly high quality at reasonable cost.

To be able to supply sufficient steel to the mills of this works, the following metallurgical extensions are planned: in 1975 a third 150-ton LD furnace to supplement the production of the two existing ones; 1976, a third 150-ton electric arc furnace; 1979, two 200-ton LD furnaces; between 1976 and 1979, four continuous slab-casting machines; 1979, a new blast furnace; and between 1975 and 1984, six new coke-oven batteries which will, on the one hand, replace some of the old ones and, on the other, be built to meet the increased coke requirements of this works.

Pretoria Works

The development planning for this works is dominated by the necessity of replacing the obsolete steel-making furnaces by basic oxygen furnaces on a new site, as well as the provision of additional mill capacity for profile products, rather than building an altogether new steelworks elsewhere. Alternative sites in the vicinity of Rosslyn are presently being examined, but the exact siting will first have to be cleared with the authorities concerned, so that a final decision cannot be expected before the beginning of 1975.

The first phase of the modernization of the existing heavy-mills complex should be completed early in 1976, thus bringing the annual capacity to 490 000 tons. Further gradual extensions are planned, to increase the ultimate annual capacity to



One of the new 136-ton ore trucks (foreground) used at the Sishen mine

The Olifants River bridge, more than a kilometre in length, under construction on the Sishen-Saldanha Bay railway route

840 000 tons. Provision has been made for the modernization of the wire plant, as well as for extensions at the forge press.

In order to improve the quality of coke, hot-charging plants were built for the coke ovens. Three existing coke-oven batteries will be replaced by new ones between 1978 and 1980.

Promising results are at present being obtained at the blast furnaces owing to the full-scale utilization of the blending plant for sinter raw materials, which was commissioned during the year under review. The equalizing of the chemical composition of the sinter, together with the oxygen enrichment of the air blast, was responsible for these improved results. No. 4 blast furnace was rebuilt in October 1973, and it is hoped that the modifications effected will lead to a long period of high iron production.

Research

In view of the Corporation's pressing problem to produce good metallurgical coke from the available South African coal, particularly for its proposed larger blast furnaces, the manufacture of form-coke by means of a proven process is at present being intensively investigated. This process is largely self-contained in respect of binder-pitch requirements, is less dependent on coal quality and is also not linked to a conventional coke oven, but instead to a continuous coking unit.

In laying down guidelines for the planning of future coal supplies, cognizance is taken of the new technique of drying and preheating in conventional coke ovens, in addition to the development of form-coke.

The sponge iron process, in which coal is used as reducing agent instead of coke, remains an attractive potential alternative to the blast furnace process. To establish the technical and economic merits of sponge iron production, using South African raw materials, Iscor is participating in a combined full-scale experiment which is being carried out on one of the prereduction furnaces of Highveld Steel and Vanadium Corporation Limited.

The commissioning of LD furnaces has once again focused attention on rapid and accurate spectrochemical analysis of steel. In this regard the development of the glow discharge lamp as source of excitation has now progressed so far that it has been installed at the Vanderbijlpark Works for the routine analysis of steel samples. A feature of this method is the very low interelement effect, resulting in enhanced accuracy.

Supplies

The value of the Corporation's total stocks, after deduction of depreciation, increased by approximately 14 per cent to R162 million, comprising R61 million in stores stocks, R87 million in process materials, rolls and ingot moulds, and R14 million in raw materials. The value of stores stocks after depreciation, expressed as a percentage of the replacement value of total corporate fixed assets, has shown a decrease from 8,8 per cent in 1967 to 5,3 per cent in 1974.

The value of contracts and orders placed for capital plant and equipment, including civil engineering work on capital extensions, was R344 million. The value of orders placed for consumable stores, refractories and spares amounted to R116 million, and for purchased raw materials to R88 million. The value of the Corporation's total buying activity for the year under review was therefore R548 million, coming to more than R2 million per working day. The sales of reclaimed materials and redundant spares and equipment yielded approximately R1,85 million.

Mining

With the exception of Thabazimbi and Mopiplaas which supply iron ore and dolomite, respectively, mainly to the Pretoria Works, comprehensive extensions are being undertaken at the other mines to increase their production capacities in order to keep pace with the rising needs of the Corporation as a whole.

Iron Ore

Although iron ore dispatches from Sishen increased by about 13 per cent over the figure for the preceding year, production was nevertheless handicapped by various factors, the most important of which undoubtedly was the exceptionally high rainfall, with the accompanying large-scale disruption of services. In contrast with the average annual rainfall of 280 mm, no less than 743 mm were recorded during the period from 1 January to 3 March 1974, bringing the total for the season at that stage to 1 020 mm. The result was that the water table at the mine rose by about 10 metres and at some places in the area even more.

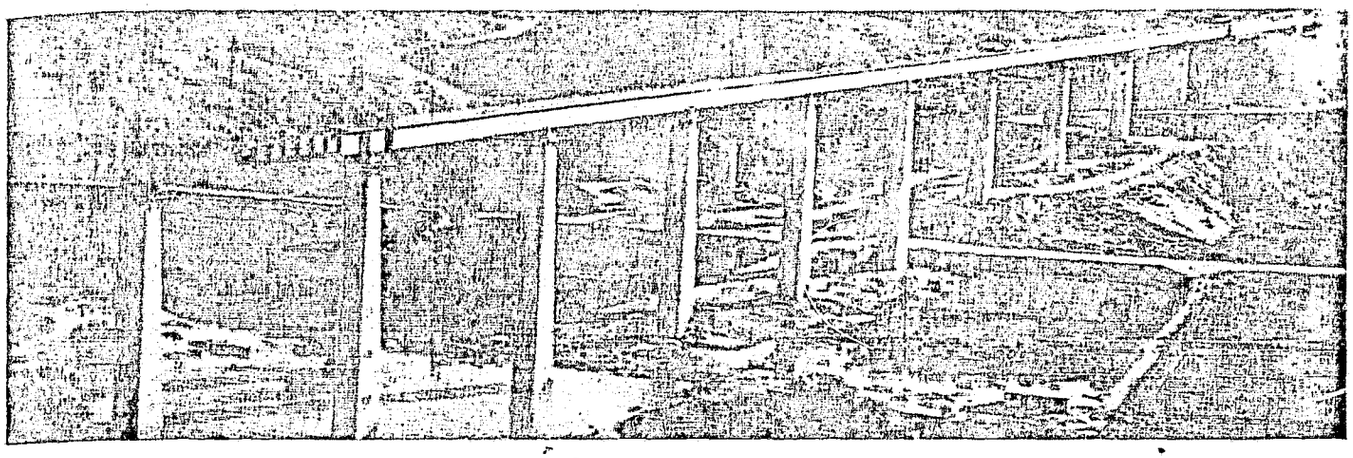
The commissioning of the new preparation plant was fraught with more problems than were expected. This also contributed towards production losses at this mine.

The total tonnage of prepared iron ore dispatched from Sishen, amounted to 3 894 500, of which 449 800 tons were destined for export, mainly to Japan, and 24 300 tons were sold locally, whilst the remainder was dispatched to the Vanderbijlpark and Newcastle Works.

For the first time in its existence the Thabazimbi mine produced more than 2 million tons of screened ore during a financial year. During the year under review, 2 141 500 tons of ore were dispatched, virtually all of which went to the Pretoria Works.

Coal

As was reported last year, the production capacity of the coal mine of The Durban Navigation Collieries (Pty.) Limited, a wholly-owned subsidiary of the Corporation, is presently being doubled. The work on this expansion is proceeding according to plan. In addition to the incline shaft, two smaller vertical shafts have been completed by means of the raise-boring method. Coal has been produced for a considerable time from primary mining sections from the bottom of the new No. 7 shaft.



Furthermore, contracts for the building of the new preparation plant, railway siding and housing have already been awarded.

This colliery remains the Corporation's main supplier of straight coking coal. During the year under review, 803 000 tons of washed coal were delivered to the three works, where it was coked after being blended with coal from several other mines. For this purpose a further 1 116 500 tons of straight coking coal had to be purchased from a number of other mines in northern Natal, as well as 2 116 000 tons of blend coking coal from various mines in the Witbank area. In addition to this metallurgical coal, the Corporation also had to purchase 472 700 tons of coal for the generation of steam and gas, bringing the total coal consumption for the year to 4 508 200 tons.

In order to meet the rapidly rising needs of the Corporation in the next decade, it has become necessary to open up a large promising mine in the Waterberg area. A start has already been made with the primary planning of this project.

Dolomite

The increased demand for metallurgical dolomite by the Vanderbijlpark and Newcastle Works is the reason why the capacity of the quarry at Glen Douglas, where there are good possibilities for expansion, has to be doubled as a first phase.

The work should be completed by the middle of 1976, after which further extensions of lesser magnitude will be undertaken. The projects falling under the first phase, some of which have already been commenced with, include a new metallurgical dolomite plant, large-scale modifications to and extension of the railway siding and additional housing for employees.

Up to the present the Newcastle Works has been supplied with dolomite by Amcor's quarry at Verwoerdburg. The tonnage during the past year amounted to 155 600. During the same period the Vanderbijlpark and Pretoria Works obtained 405 300 and 476 000 tons, respectively, from the Corporation's quarries at Glen Douglas and Mooiplaas.

Sales of crushed stone and sand, arisings at both quarries, increased at Glen Douglas, whilst the demand at Mooiplaas decreased in comparison with last year.

Tin

Activities at the Uis tin mine, north-west of Windhoek in South West Africa, which belongs to the Corporation's wholly-owned subsidiary, Industrial Minerals Mining Corporation (Pty.) Limited, showed satisfactory results. A total of 1 240 tons of tin concentrate, with a tin metal content of 63 per cent, was dispatched to the smelting plant at Vanderbijlpark. However, this figure constituted only 51 per cent of the total requirements. The remainder had to be purchased from outside suppliers.

Zinc

Owing to the particularly favourable price of zinc on the London Metal Exchange – the basis price at which the metal is marketed locally – the Rosh Pinah mine had a very successful year. During the year under review this mine, which is operated by Imcor Zinc (Pty.) Limited, a company in which Isco. holds a controlling share, supplied 26 300 tons of zinc concentrate, with a zinc metal content of 57 per cent, for processing to Zincor's works near Springs. In addition, 7 700 tons of lead concentrate were produced, and sold in South West Africa.

The second ore body, situated in the immediate vicinity of the mine, is presently being prepared for mining. The necessary facilities will shortly be completed so that production may commence, when the ore will be treated by the existing concentration plant.

Sand

In order to ensure that sand of the correct quality and in adequate quantities is available for the new technique of lining ladles at the works with sand instead of refractory bricks, the Corporation purchased a property north-west of Pretoria, at the Fortsig station, on which the correct type of sand is found. A sand preparation plant has been erected and will, it is hoped, be in full operation soon.

Raw materials exploration

Drilling proceeded in the vicinity of Sishen and was considerably intensified towards the end of the year under review, inter alia to find a suitable site for another plant for the preparation of export ore.

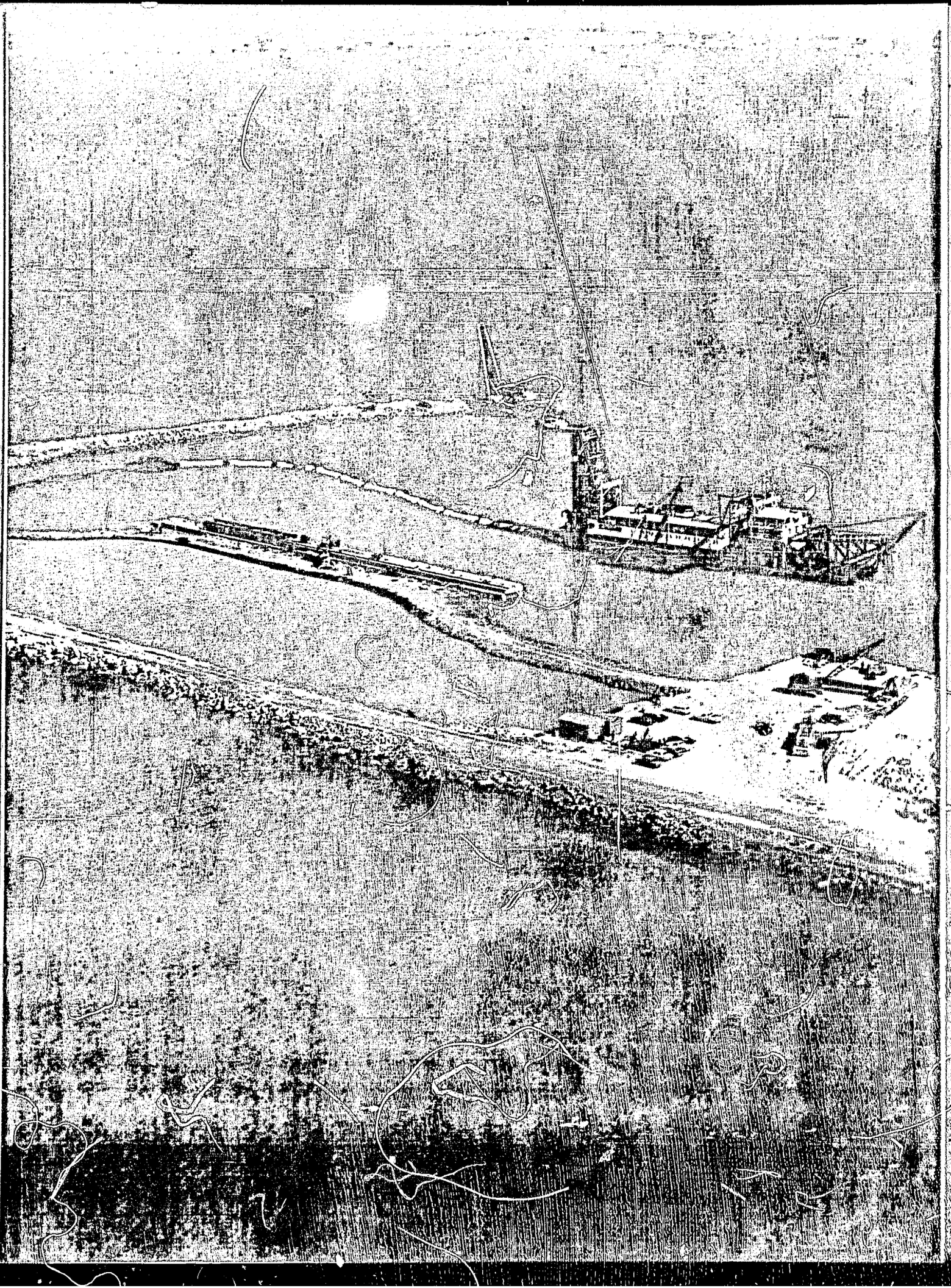
In an area of the Waterberg coal-field, huge reserves of metallurgical coal were traced by means of intensive drilling. Further drilling is still being undertaken to obtain as much information as possible for the detailed planning of the opencast mine envisaged in this vicinity.

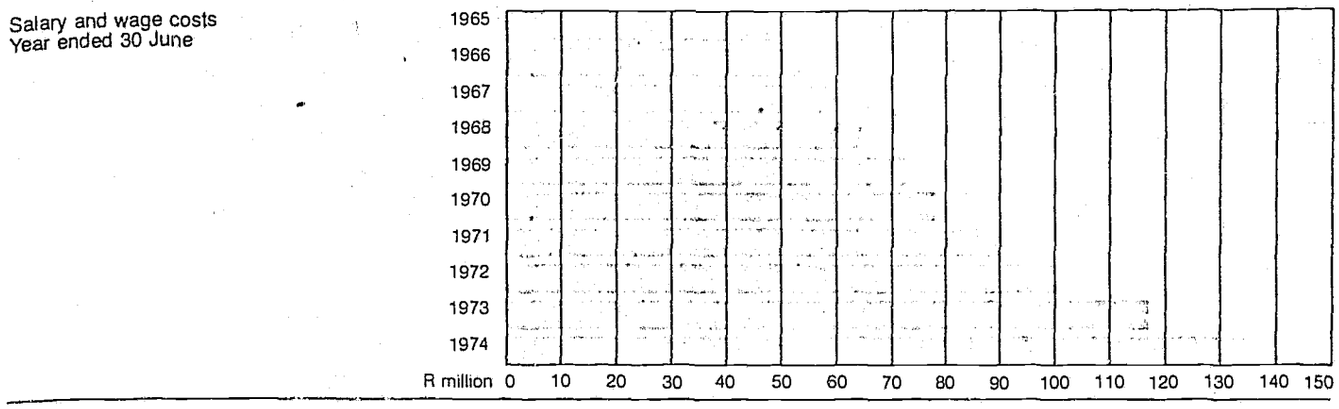
Exploration in the Vanrhynsdorp district resulted in considerable reserves of high-grade limestone, suitable for use as a flux in blast furnaces, being proved within 5 km of the Sishen-Saldanha Bay railway route.

In addition to the exploration for zinc at Rosh Pinah and vicinity, similar examinations are being carried out in the north-western Cape, where promising results have already been obtained with aerial and ground surveys. Intensive prospecting is being carried out in the search for fluorspar in the Waterberg district and for coal in northern Natal. Exploration work in an effort to find exploitable tin deposits was undertaken in Rhodesia and South West Africa.

Sishen-Saldanha Bay project

Construction work in respect of the three main parts of the Sishen-Saldanha Bay project, namely the mine, railway line and harbour, has been in full swing since June 1973. At one stage, the harbour contractor could not maintain the expected rate of construction on the breakwater and other harbour works because the sand in the harbour does not flow readily, thus lowering the production capacity of the dredgers. The contrac-





tor further found that the sand in some parts of the Bay, where he wanted to reclaim it, was much finer than he had initially thought, with the result that a higher dredger suction capacity was required.

Two additional dredgers are being employed, not only to return to the required rate of construction but also in an effort to make up the leeway. To ensure that ore exports will commence in the third quarter of 1976, as was originally planned, the Corporation has decided to build a second jetty to cater for ore carriers of 100 000 tons. This jetty will later be used, after completion of the planned large jetty for the handling of 250 000 ton vessels, for the discharging of coal carriers and, if it should appear necessary, for the shipping of manganese ore. Although this decision will cost the Corporation more money, it will at the same time considerably increase the usefulness and capacity of the harbour.

With the exception of the Orange River bridge near Groblershoop, the exceptionally heavy rains during the first quarter of 1974 did not result in any serious delay in contract work in the northern area. Contracts in the southern part, which lies within the winter rainfall region, were also not materially affected by rain.

Contracts are still to be entered into for certain workshop facilities, rolling stock for operating the railway line and tugs and service vessels for the harbour. Preparations are presently being made for the mechanized plate-laying over the full distance of 864 km, and actual plate-laying is expected to commence by the end of 1974.

Good progress has been made with the housing contracts. In Kathu, the new township at Sishen, 151 houses were completed at the end of the financial year, 134 having already been occupied. In the Saldanha Bay area, housing for Whites will be provided mainly in three centres, namely Vredenburg, Saldanha and Langebaan. The greatest concentration of building activities has hitherto been at Vredenburg, where 105 houses have already been completed, of which 65 are occupied.

A start has already been made, too, with the development of a Coloured township at Vredenburg, where the Corporation is erecting 271 houses of a high standard.

For economic reasons, and in order to ensure that the project will to a large extent be independent of petroleum products, the Iscor Board decided that the railway line will be electrified. This step will increase the capital cost of the project by approximately R20 million – an amount which should be recoverable from savings on operating costs within a fairly short period.

Electrification will be based on an alternating current of 50 kV as against the more customary 25 kV hitherto applied overseas. The former was chosen because electrification at the lower voltage would be totally uneconomical. Enquiries for electrification and electric locomotives will be issued in the fourth quarter of 1976, and it is expected that the electrified railway line will be commissioned by the end of 1977.

Semis works, Saldanha Bay

The proposed semis works referred to last year, has not yet been given the go-ahead, since Iscor and Vöest-Alpine AG as the two main partners are still busy with negotiations with other interested parties. The latest development is that the works, planned for an initial annual capacity of 3 million tons which may eventually be increased to 12 million tons, will definitely be erected at Saldanha Bay. This choice of location was endorsed by the special *ad hoc* committee appointed by the Government to investigate the matter as a whole. The planning of the semis project has reached an advanced stage.

The proposed works will produce blooms, billets and slabs, destined almost exclusively for the export market. For the first phase of the project it is intended to erect two blast furnaces, three 160-ton LD furnaces, three continuous casting machines for slabs and two for blooms, together with a billet mill.

Capital expenditure on this planned works, calculated at present price levels, is estimated at R660 million to produce 3 million tons of semis a year. According to the current arrangement, the share capital will amount to R50 million, of which Iscor will have to provide approximately R25,5 million for its shareholding of about 51 per cent. The partners will be responsible for the financing of the balance, proportional to the predetermined respective percentages of the production to be taken by them.

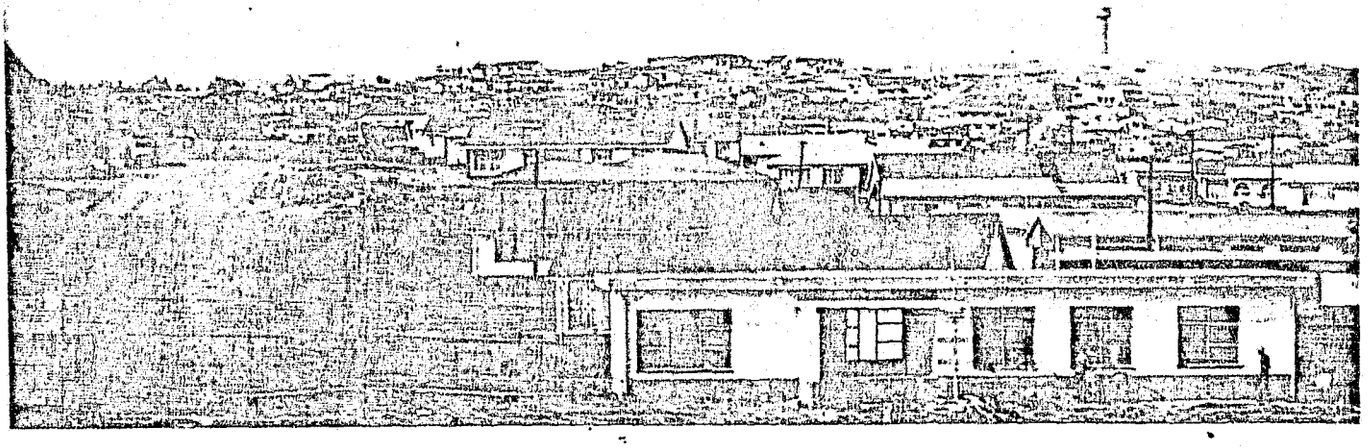
Personnel

During the financial year, salary and wage costs amounted to R145,2 million for a labour strength of 21 700 Whites and 20 900 Non-Whites, excluding agreement posts and Non-White employees at Durnacol, Uis and Rosh Pinah. The comparative figure for the previous year was R116,7 million. This increase was the result of two salary and wage adjustments made during the year under review to retain employees and to draw new ones.

Owing to the rise in the cost of living, the Corporation was compelled to make an interim adjustment during October 1973 to the remuneration of artisans, production workers and the incumbents of related posts, as well as that of Coloureds and Bantu workers. In May 1974, two months before the expiry of the industrial agreement, the Corporation was again faced by a critical situation in that it was no longer competitive in the labour market. A new agreement was therefore drawn up, to which the relevant trade unions duly agreed, accepting it as current up to 30 June 1976. In addition to this industrial agreement, salary and wage adjustments were also effected in respect of all the other employees as from 1 May 1974.

Despite all these increases and the other efforts made to give Iscor more prominence in the labour market, particularly at schools and higher educational institutions, the Corporation nevertheless still failed to obtain the required manpower for its three works and seven mine centres.

A dredger pumping sand for reclamation of the ore stockpiling area in Saldanha Bay.



An intensified recruiting drive abroad is gradually bearing fruit. During the year, 495 employees were recruited overseas, but there are already indications that considerably more immigrants will join Iscor in the current financial year. Numerous efforts have been made to make better use of the local labour market. At present there are 719 women in posts previously classified as male posts. This figure does not include a considerably larger number of women placed in administrative posts.

To ensure that employees have the necessary potential for a particular type of work, a classification system was developed for production workers, which is presently being extended to include all types of work at the works centres. In addition to more selective employment, considerable progress has been made with on-the-job training of production workers. This training is offered on a wide front at all the works centres, and manuals have already been prepared for a large number of posts. On-the-job training is supplemented by external courses at technical colleges. The decline in production losses is due to a large extent to selection and training.

The same selection, classification and training actions have also been introduced on a more intensive level than before in respect of the Non-White workers. Approximately 8 000 Non-Whites have already received formal and on-the-job training. The Corporation is actively participating in efforts to establish training centres for Non-Whites in White areas in order to ensure higher productivity of these workers.

The result of this development programme is that, in view of the more modern technology in steel manufacture, stronger emphasis is placed on technical skills. Accordingly, the need for engineers, technicians and artisans has already increased.

In order to draw bursary students in engineering, bursary loans have had to be increased from R800 to R900 per annum. At present 201 students are making use of the bursary loan scheme, whilst 41 newly qualified engineers assumed duty during the year.

The high quality of apprentice training offered by the Corporation, remains a strong attraction for apprentices. At the end of the financial year, 2 808 apprentices were enrolled at the various centres, whilst 495 artisans had successfully completed their courses. In addition to the high standard of training of artisans, such good progress was made with the training of technicians that the first course for the subject Career Technology (Electric Power and Control) was introduced in January 1974 at the Pretoria College for Advanced Technical Education.

Meanwhile, management training and development proceed on a continuous basis, and officials in managerial posts are afforded the opportunity to participate in internal and external courses. Up to the present, 66 senior managers have completed or partially completed the Advanced Management Programme of the University of South Africa, whilst 82 have attended an abridged course in managerial techniques. Other courses are aimed at specific knowledge requirements of management personnel. Everything possible is being done to maintain the Corporation's level of management as high as possible.

In addition to the training and development programmes for the various employee categories, the Corporation's organizational structure is gradually being adjusted in such a way that more attractive career possibilities are created for each category of occupation. It is also endeavoured to eliminate possible duplication and effect better utilization of labour by means of the consolidation of functions.

Furthermore, particular attention is given to the retention of employees. Wherever practicable, working conditions are changed in such a way that employees find it easier to adapt themselves. A case in point is Iscor's decision to establish care centres for the children of mothers on shift work.

On an outside-the-work basis, new employees – immigrants and South Africans – are drawn into assimilation programmes and community activities in order to promote their social adjustment. The establishment of attractive residential areas also contributes towards the better adaptation of employees. In the past year 1 580 houses and 335 flats were built at Pretoria, Vanderbijlpark, Newcastle, Sishen and Saldanha. In respect of the home ownership scheme, 1 146 loans to the value of R22 million were granted.

In the field of housing for Non-Whites, the Corporation has made a historical breakthrough by obtaining ownership within a proclaimed Coloured area. The result is that, as previously mentioned, the Corporation can now provide proper housing for Coloureds in the Saldanha Bay area.

Controlled and associated companies

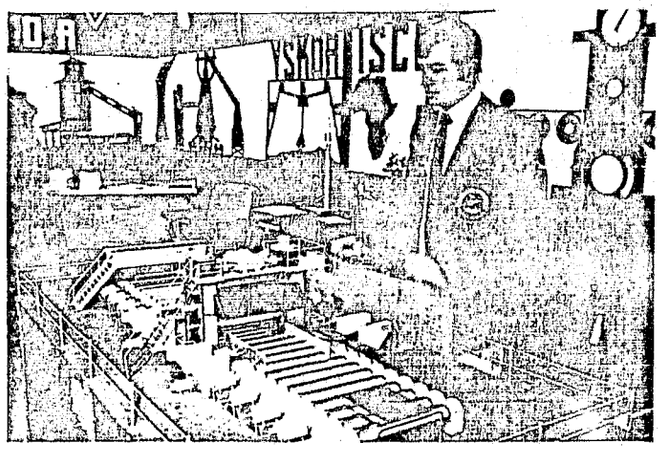
The affairs of public companies associated with Iscor are dealt with by their chairmen in their respective annual reports.

Iscor's interest in International Pipe and Steel Investments South Africa (Pty.) Limited (Ipsa) is held through Metkor Investments Limited. The affairs of Ipsa, in so far as they have a bearing on Iscor, are dealt with in the annual reports of Metkor and those public companies which are subsidiaries of Ipsa.

Amcor Limited, over which Iscor acquired control, continues to operate successfully in the fields of metal alloy production, carbon products, phosphate fertilizers and base metals.

During the year under review negotiations were finalized and Iscor acquired a 49 per cent holding and Metkor 51 per cent in Metpro (Pty.) Limited, which concentrates basically on the manufacture of railway truck brake-shoes to be used for the Sishen-Saldanha Bay project. Iscor also acquired the entire issued share capital of Van Thiel's Wire Industry (Pty.) Limited, owning property at Mobeni in Natal which the Corporation temporarily required for purposes of establishing warehouse facilities in that area. Negotiations are also proceeding for the acquisition of a property at Alrode. These facilities are required by the Corporation, on the one hand to handle import and export activities through Durban and on the other hand to be

...ter housing at Vredenburg
...rth of Saldanha Bay



A model of a rolling mill built by Iscor apprentices at Vanderbijlpark for educational exhibitions.

used as a transloading depot internally. Steel products from all three works will be sent there in bulk in order to achieve optimum operating practice within the respective works.

The other companies in which Iscor has a direct or indirect financial interest and whose operations supplement its main functions, are the following:

(i) Cape Town Iron and Steel Works (Pty.) Limited (Cisco), for the production of reinforcing rod for sale to Iscor's customers in the Cape Town area.

(ii) Yskor Newcastle Grondbesit Beperk, on whose property the South Works at Newcastle is situated.

(iii) Minsa (Pty.) Limited, Iscor Housing Utility Company, Iscor Estates (Pty.) Limited and Vanderbijl Park Estate Company, for the provision of housing facilities for employees and for general property development.

(iv) The Durban Navigation Collieries (Pty.) Limited, Industrial Minerals Mining Corporation (Pty.) Limited and Imcor Zinc (Pty.) Limited, for the provision of essential raw materials in the form of coking coal and base metals, and Ferrous Scrap Distributors (Pty.) Limited for scrap.

(v) Heckett (S.A.) (Pty.) Limited, for the recovery of scrap; Iscor Utility Stores (Pty.) Limited, Air Products (S.A.) (Pty.) Limited, Vantin (Pty.) Limited and Steel Sales Company of Africa (Pty.) Limited, for the provision of employee services and as media for the sale and distribution of Iscor products; and Rhodesian Steel Sales Company (Pvt.) Limited which, through its wholly-owned subsidiary, Iscor (Rhodesia) Steel Sales Company (Pvt.) Limited, undertakes the sale of the Corporation's products in Rhodesia.

(vi) An overseas service company in London, to assist with the administration of the Corporation's affairs.

In addition, the Corporation has representatives in London and New York, and agents in the United States of America, South America, the United Kingdom, Italy and Mauritius.

Directorate and Management

On 1 March 1974 the undersigned was reappointed Chairman of the Corporation by the State President for a period of three years. At a meeting of private shareholders, held on 28 November 1973, Prof. H.J. Samuels was reappointed a director to hold office until the third non-extraordinary general meeting after the meeting at which he was reappointed. Dr. M.D. Marais and Mr. J.J. Vermooten were both reappointed directors of the Corporation by the State President for further periods of three years with effect from 28 November 1973 and 25 May 1974, respectively.

On 1 July 1974, Mr. K.R. Rümelin, previously Divisional General Manager (Operations), was appointed General Manager to relieve the Managing Director of some of his responsibilities. At the same time the top management of the Corporation was restructured to meet the changing conditions arising from Iscor's expanding activities and the wide sphere of its interests.

I would like to express the Board's appreciation to all employees for their loyal service, which has played a major part in the success of the Corporation's operations.

At the meeting I will move that the report of the directors and the accounts, as submitted, be approved and adopted and that all things undertaken and performed on behalf of the Corporation, be confirmed.

Pretoria
23 October 1974

T.F. Muller
Chairman

Annual Financial Statements

for the year ended 30 June 1974

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Notes on financial statements	26–30
Statement of source and application of funds	31

Board approval

The annual financial statements which appear on pages 23 to 31 were approved by the Board of Directors on 25 September 1974 and are signed on its behalf by

T.F. Muller
J.P. Coetzee | Directors **J.J.M. Naudé** Secretary

Report of the auditors

To the shareholders of South African Iron and Steel Industrial Corporation, Limited (constituted and incorporated by Act of Parliament in the Republic of South Africa).

We have examined the annual financial statements of the Corporation set out on pages 23 to 31 for the year ended 30 June 1974.

In our opinion, based on our examination, they fairly present the financial position of the Corporation and the results of its operations for the year then ended.

Altmann and Brugman
Peat, Marwick, Mitchell & Co.
Chartered Accountants (S.A.)

Pretoria and Johannesburg
25 September 1974

Report of the Directors

The directors have pleasure in presenting their report on the results and activities for the year ended 30 June 1974.

Financial results

The financial results of the Corporation's activities during the year were as follows:

	1974	1973
	R000	R000
Trading profit	12 885	21 859
Dividends received	2 111	2 845
	14 996	24 704
Financing charges	52 599	20 750
Loss/(profit) for year	37 603	(3 954)

Although the loss for the year amounted to R37 603 000, it should be noted that the 'Distributable Reserves' of the Corporation, after providing R33 000 for the normal dividend on the 7½% cumulative preference shares, decreased by only R16 102 000 from R355 987 000 at 30 June 1973 to R339 885 000 at 30 June 1974.

Capital employed

During the year a further 15 000 000 B shares were issued at par to the State President increasing the total issued and fully paid capital from R165 200 000 to R195 200 000.

During the year the Corporation made further stock issues, entered into revolving credit agreements and utilized suppliers credit, which resulted in fixed period loans increasing by R369 631 000 to R809 324 000 (1973 – R439 693 000).

Fixed assets

The additional investment in fixed assets amounted to R479 703 000.

The net book value of fixed assets at the year-end amounted to R1 118 610 000 (1973 – R674 652 000). Of this amount R381 001 000 (1973 – R311 577 000) represented extensions still under construction at 30 June 1974.

Interests in controlled and associated companies

Unlisted shares reflected a net increase during the year of R2 751 000 which is mainly accounted for by the purchase of a 49% interest in a coal mining company in Mocambique and the acquisition of the total share capital of a company owning a fixed property. This property is used by the Corporation for warehousing purposes.

The net increase of R22 042 000 in loans and advances is mainly accounted for by further advances to Iscor Estates (Proprietary) Limited amounting to R17 775 000 to meet expenditure on home ownership and housing schemes for employees and a further loan of R3 942 000 to Air Products South Africa (Proprietary) Limited, an associated company of the Corporation.

Directorate

The names of the directors in office at 30 June 1974 and at the date of this report are set out on page 1.

At a meeting of private shareholders held on 28 November 1973, Prof. H.J. Samuels was re-appointed as a director of the Corporation.

Dr. M.D. Marais and Mr. J.J. Vermooten were both re-appointed directors by the State President for further periods of three years with effect from 28 November 1973 and 25 May 1974 respectively.

On 1 March 1974 Dr. T.F. Muller was re-appointed Chairman of the Corporation by the State President for a further period of three years.

Income Statement

for the year ended 30 June 1974

	Notes	1974 R000	1973 R000
Turnover		469 341	394 624
Profit from trading	2	12 885	21 859
Dividends received	3	2 111	2 845
		14 996	24 704
Financing charges	4	52 599	20 750
Loss/(profit) for year		37 603	(3 954)

Balance Sheet

at 30 June 1974

	Notes	1974 R000	1974 R000	1973 R000	1973 R000
Source of capital employed					
Share capital	5		195 200		165 200
Distributable reserves	6		339 885		355 987
Shareholders' interest			535 085		521 187
Fixed period loans	7		809 324		439 693
			1 344 409		960 880
Employment of capital					
Fixed assets	8		1 118 610		674 652
Interests in controlled and associated companies	9		172 734		147 941
Loan portion of taxation			935		1 682
Current assets					
Stocks and work-in-progress	10	162 190		142 117	
Debtors		79 695		66 715	
Bankers and short-term deposits		279		24 060	
Steel import scheme	11	35 790	277 954	12 618	245 510
			1 570 233		1 069 785
Current liabilities					
Creditors		143 387		85 853	
Bankers and short-term loans		54 333		31	
Shareholders for dividends		16		16	
Iron and steel export scheme	12	4 296		3 398	
		202 032		89 298	
Provisions					
Furnace reconditioning, renewal of short-life assets, extraordinary maintenance, self-insurance and sundry contingencies		23 192	225 624	19 607	108 905
			1 344 409		960 880

Notes on the Financial Statements

1. Accounting policies

This summary of the principal accounting policies of the Corporation is presented to assist in the evaluation and appreciation of the annual financial statements in which these policies have in all material respects been followed.

1.1 Constitution

The Corporation is constituted in terms of the Iron and Steel Industry Act, 1928 (as amended). This act stipulates that the Companies Act, 1926 or any amendment thereof does not apply to the Corporation.

1.2 Turnover

Turnover represents the invoiced sales value (excluding any import or export levies) of all products sold on the local and export markets.

1.3 Depreciation

Depreciation of fixed assets used in production is calculated on a straight line basis at a rate determined by the expected life of each individual type of asset. Should a certain asset continue in use after completion of its anticipated life, depreciation continues to be raised at the same rate. Conversely, where an asset is retired before the expiry of its anticipated life, depreciation ceases to be raised. The original cost of the redundant or obsolete asset is written off against accumulated depreciation and not against income. The proceeds from sales of fixed assets are credited to accumulated depreciation. No depreciation is provided on properties, leases and rights.

1.4 Increased replacement costs of fixed assets

In addition to depreciation, a charge based on the current wholesale price index is made to production costs to provide for the estimated increased replacement cost arising in a particular year of operation.

1.5 Provisions

Furnace reconditioning, renewal of short-life assets, extraordinary maintenance and self-insurance are provided for by charges to production costs. When expenditure in respect thereof is incurred, such expenditure is charged against these provisions.

1.6 Financing charges

Financing charges consist mainly of interest paid on fixed period borrowings less interest received and represent the net cost of financing the capital extension projects and current operations.

The cost of raising loans together with differences resulting from foreign currency conversions, costs and commissions arising from forward exchange purchase contracts, discounts on the issue price of bonds, management fees and any other expenses incurred on receipt or renewal of loans are also included therein and are charged when incurred.

1.7 Deferred and current taxation

Based on present forecasts and current tax legislation, the Corporation will not be liable for taxation in the foreseeable future. Accordingly no provision is made for taxation deferred by reason of accelerated allowances on fixed assets and on account of the assessed loss for the current year no provision has been made for current taxation.

1.8 Site preparation

Up to 30 June 1973 expenditure on site preparation was written off against profits, except for R13 870 000 in respect of certain site preparation and ancillary expenses relating to the Newcastle and Vanderbijlpark Works. This amount was held under 'extensions under construction' at that date.

During the current year the basis of accounting has been changed in that expenditure amounting to R7 525 000 in respect of site preparation for extensions has been capitalised and this amount together with the above R13 870 000, is now shown under a separate asset head – 'site preparation'. The intention is to write this expenditure off against future profits over a limited period.

1.9 Steel used on capital extensions

No adjustment is made for profit arising on steel manufactured by the Corporation, sold at arms length to the trade and subsequently used by contractors on the Corporation's capital extensions.

1.10 Foreign currency conversions

Loans and suppliers credit repayable in foreign currencies and secured by forward exchange purchase contracts are converted into South African currency at the fixed rates of exchange applicable to the respective forward exchange purchase contracts.

Loans and suppliers credit repayable in foreign currencies and not secured by forward exchange purchase contracts are converted into South African currency at rates of exchange ruling at balance sheet date.

Current assets and current liabilities in foreign currencies are converted into South African currency at rates of exchange ruling at balance sheet date.

1.11 Stocks and work-in-progress

Finished products and work-in-progress are valued at current standard costs including labour, materials, manufacturing and direct overhead costs.

Raw materials and consumable stores are valued at current purchase price.

Plant spares are valued at current purchase price less provision for obsolescence and depreciation.

Rolls and moulds are valued at cost less a charge for usage and obsolescence.

Appropriate provision has been made where the above stock values are considered to exceed net realisable values.

The bases of valuation of stocks and work-in-progress are consistent with those of prior years and the aggregate book value is below cost

	1974 R000	1973 R000
2. Profit from trading	**12 885**	**21 859**
– after charging		
Depreciation of fixed assets	35 745	31 388
Increased replacement cost of fixed assets	21 626	14 420
Furnace reconditioning and renewal of short-life assets	13 087	11 419
Extraordinary maintenance provision	5 624	4 482
Self-insurance provision	1 000	377
3. Dividends received		
Listed shares	1 498	1 433
Unlisted shares	613	1 412
	2 111	2 845
4. Financing charges		
Gross financing charges	63 937	25 637
Less –		
Interest from controlled and associated companies	4 530	2 295
Other interest received	4 053	2 592
Allocation to Sishen-Saldanha scheme (see note 8(iii))	2 755	—
Net financing charges	52 599	20 750

	1974 R000	1973 R000
5. Share capital		
Prescribed by Iron and Steel Industry Act, 1928 (as amended)		
500 000 A shares of R2 each	1 000	1 000
125 000 000 B or preference shares of R2 each	250 000	250 000
	251 000	251 000
Authorized, issued and fully paid		
500 000 A shares of R2 each	1 000	1 000
96 880 364 B shares of R2 each	193 761	163 761
219 636 7½% cumulative preference shares of R2 each	439	439
	195 200	165 200
The unissued 'B' or preference shares may be issued by the Board at not less than par and under such conditions as the State President may approve, provided that present holders of 'B' shares shall have the first right to subscribe for such additional shares.		
6. Distributable reserves		
Reserve for increased replacement cost of fixed assets		
Balance at beginning of year	160 198	145 778
Charged to production costs	21 626	14 420
Balance at end of year	181 824	160 198
General reserve	194 000	194 000
Accumulated (loss)/surplus		
Balance at beginning of year	1 789	1 474
(Under)/over-provision for taxation in previous years	(92)	273
	1 697	1 747
(Loss)/profit for year	(37 603)	3 954
	(35 906)	5 701
Appropriations – 30 June 1973		
Writing off site preparation for extensions		3 879
Dividend on 7½% cumulative preference shares		33
Accumulated (loss)/surplus at end of year	(35 906)	1 789
Total distributable reserves before dividend – 30 June 1974	339 918	
Dividend on 7½% cumulative preference shares	33	
Total distributable reserves	339 885	355 987
7. Fixed period loans	809 324	439 693
Loans repayable in foreign currencies which are not secured by forward exchange purchase contracts amount to R41 454 000 (1973 – R14 237 000). Of this amount R26 585 000 (1973 – R10 182 000) is payable in United States dollars and R14 735 000 (1973 – R4 017 000) in British Sterling.		

	1974 R000	1973 R000
8. Fixed assets		
Properties, leases and rights	14 396	10 230
Buildings and works	323 794	194 385
Machinery, plant and furnaces	691 633	440 976
Site preparation	21 395	—
Total cost	1 051 218	645 591
Depreciation	313 609	282 516
	737 609	363 075
Extensions under construction – at cost	381 001	311 577
Net book value	1 118 610	674 652
Depreciation at beginning of year	282 516	256 516
Charged to production costs	35 745	31 388
	318 261	287 904
Redundant or obsolete assets written off	4 652	5 388
Depreciation at end of year	313 609	282 516

(i) Fixed assets amounting to R3 641 000 (1973 – R1 624 000) have been erected on property of companies wholly-owned by the Corporation.

(ii) An amount of R3 329 000 included under 'buildings and works' is in respect of a hostel for Bantu employees of the Corporation which has been erected on leasehold property in the South African Bantu Trust area. This amount represents the cost of the hostel buildings erected in terms of the leasehold agreement.

(iii) 'Extensions under construction' includes expenditure of R69 152 000 (1973 – R8 501 000) on the Sishen-Saldanha scheme. This expenditure includes an allocation of financing charges amounting to R2 755 000 (1973 – Nil). The scheme is being undertaken and financed by the Corporation as authorized in terms of Acts 28 and 29 of 1973.

9. Interests in controlled and associated companies		
Listed shares – at cost (market value 30 June 1974 – R22 541 000; 1973 – R25 782 000)	24 389	24 389
Unlisted shares – at cost	55 353	52 602
Loans and advances		
Due to Corporation	101 432	78 346
Due by Corporation	(8 440)	(7 396)
	172 734	147 941

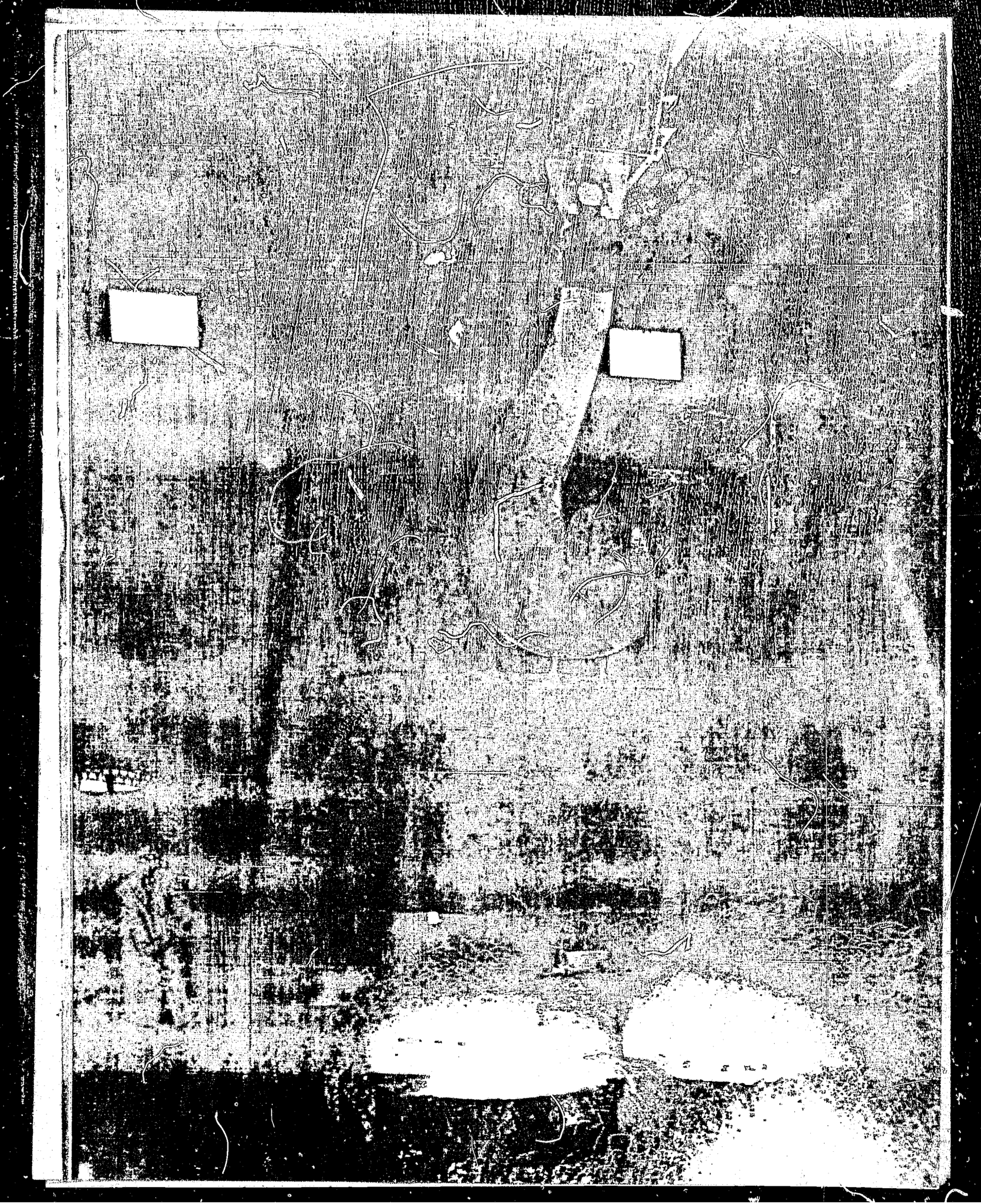
10. Stocks and work-in-progress less provisions – in the aggregate below cost		
Finished products	14 348	13 997
Work-in-progress	56 122	57 773
Raw materials	14 126	10 644
Plant spares	29 223	21 839
Consumable stores	32 127	24 950
Rolls and moulds	16 244	12 914
	162 190	142 117

	1974 R000	1973 R000
11. Steel-import scheme		
The steel import scheme is administered by the Corporation on behalf of the Department of Industries. The long term financing of the scheme is now being provided by the Government, however the short-term bridging finance is still provided by the Corporation. The details are as follows:		
Cost of imported steel in excess of the local steel cost plus interest, not yet recovered from levies imposed under the scheme	86 113	12 618
Finance provided by the Government	50 323	—
	35 790	12 618
12. Iron and steel export scheme	4 296	3 398
This balance represents the excess of local steel producers levy over claims to date under the export promotion scheme administered on behalf of the Department of Industries.		
13. Contingent liabilities		
The Corporation has –		
(i) guaranteed the principal sum and interest on loans to its housing and estate companies	31 000	31 000
(ii) indemnified Iscor Pension Fund against any loss arising out of loans made to Iscor Estates (Proprietary) Limited		
It is not anticipated that the Corporation will be called upon to fulfil any of the above obligations.		
14. Capital commitments		
(i) Contracts entered into for		
– Extensions	451 000	536 000
– Sishen-Saldanha scheme	146 000	170 000
(ii) Authorized expenditure for which there are no negotiated contracts		
– Extensions	100 000	149 000
– Sishen-Saldanha scheme	124 000	69 000
Capital expenditure will be financed from share issues, loans and funds generated by the Corporation from normal operations.		
15. Comparative figures		
Certain figures relating to 1973 have been restated in order to reflect appropriate comparisons with those of 1974.		

Statement of source and application of funds

for the year ended 30 June 1974

	R000
Source of funds	
Profit before cost of financing	14 996
Depreciation	35 745
Provision for increased replacement cost of fixed assets	21 626
Funds from normal operations	72 367
Increase in share capital	30 000
Increase in fixed period loans	369 631
Loan portion of taxation refunded	747
Decrease in working capital	84 475
	557 220
Application of funds	
Acquisition of fixed assets	479 703
Increase in interests in controlled and associated companies	24 793
Financing charges	52 599
Dividend on 7½% cumulative preference shares	33
Under-provision for taxation in a previous year	92
	557 220



Ten-year Review 1965 - 1974 (Year ended 30 June)

Description	1974	1973	1972
Raw materials consumed (tons):			
Iron ore (including fine ore for sintering)	**5 968 200**	5 593 000	5 668 800
Coking coal	**3 980 700**	3 840 800	3 806 800
Other coal	**478 000**	471 000	424 600
Dolomite (raw)	**1 036 400**	1 002 200	1 006 700
Production (tons):			
Ingot steel	**4 036 500**	4 052 700	3 816 300
Continuously cast blooms	**20 200**	—	—
Sales (tons):			
Steel products*	**3 196 100**	3 005 300	2 691 700
Pig iron	**684 700**	827 700	846 900
Coke oven by-products	**140 800**	145 100	144 500
Operating results:	**R**	R	R
Net sales revenue	**444 840 000**	372 819 000	304 067 000
(Loss)/net profit before tax	**(37 603 000)**	3 954 000	9 538 000
Taxation:	**—**	—	527 000
Financial:			
Source of capital employed:			
Share capital	**195 200 000**	165 200 000	145 200 000
Distributable reserves	**339 885 000**	355 987 000	341 252 000
Fixed-period loans	**809 324 000**	439 693 000	175 134 000
Current liabilities and provisions	**225 824 000**	108 905 000	100 793 000
	1 570 233 000	1 069 785 000	762 379 000
Employment of capital:			
Fixed assets			
in operation – at cost less depreciation	**737 609 000**	363 075 000	332 662 000
under construction – at cost	**381 001 000**	311 577 000	87 214 000
Investments	**173 669 000**	149 623 000	142 172 000
Current assets	**277 954 000**	245 510 000	200 331 000
	1 570 233 000	1 069 785 000	762 379 000

*Including off-cuts and scrap.

Teeming molten steel into ingot moulds at the Pretoria Works.

1972	1971	1970	1969	1968	1967	1966	1965
5 668 800	4 905 800	4 073 300	4 231 100	4 086 400	4 021 500	3 932 200	3 517 900
3 806 800	3 644 400	3 173 800	3 162 100	3 141 900	3 099 200	2 945 100	2 750 800
424 600	444 600	433 700	407 900	460 900	480 400	449 400	427 000
1 006 700	886 300	631 700	584 800	636 200	598 900	650 600	605 700
3 816 300	3 478 400	3 384 900	3 350 400	3 194 600	2 858 400	2 592 000	2 588 400
—	—	—	—	—	—	—	—
2 691 700	2 667 400	2 698 200	2 496 800	2 266 100	2 121 000	1 811 200	1 928 200
846 900	650 200	100	144 200	152 700	299 100	259 200	235 400
144 500	154 500	158 500	147 300	151 500	130 300	133 800	112 400
R	R	R	R	R	R	R	R
304 067 000	291 470 000	238 480 000	219 862 000	199 382 000	186 851 000	159 786 000	165 671 000
9 538 000	19 520 000	15 040 000	19 074 000	16 218 000	22 727 000	19 739 000	30 915 000
527 000	4 946 000	5 781 000	9 933 000	6 854 000	8 904 000	3 218 000	5 163 000
145 200 000	125 200 000	95 200 000	85 200 000	85 200 000	70 200 000	70 200 000	70 200 000
341 252 000	330 644 000	316 130 000	305 276 000	296 573 000	286 732 000	271 944 000	257 375 000
175 134 000	138 583 000	65 615 000	32 839 000	18 000 000	—	—	—
100 793 000	72 827 000	85 693 000	53 402 000	50 336 000	57 760 000	40 246 000	35 317 000
762 379 000	667 254 000	562 638 000	476 717 000	450 109 000	414 692 000	382 390 000	362 892 000
332 662 000	308 799 000	288 060 000	231 862 000	235 791 000	204 396 000	181 546 000	141 619 000
87 214 000	37 140 000	28 970 000	31 630 000	12 478 000	31 347 000	34 413 000	48 600 000
142 172 000	131 774 000	127 126 000	79 553 000	64 733 000	57 080 000	59 626 000	60 635 000
200 331 000	189 541 000	118 482 000	133 672 000	137 107 000	121 869 000	106 805 000	112 038 000
762 379 000	667 254 000	562 638 000	476 717 000	450 109 000	414 692 000	382 390 000	362 892 000

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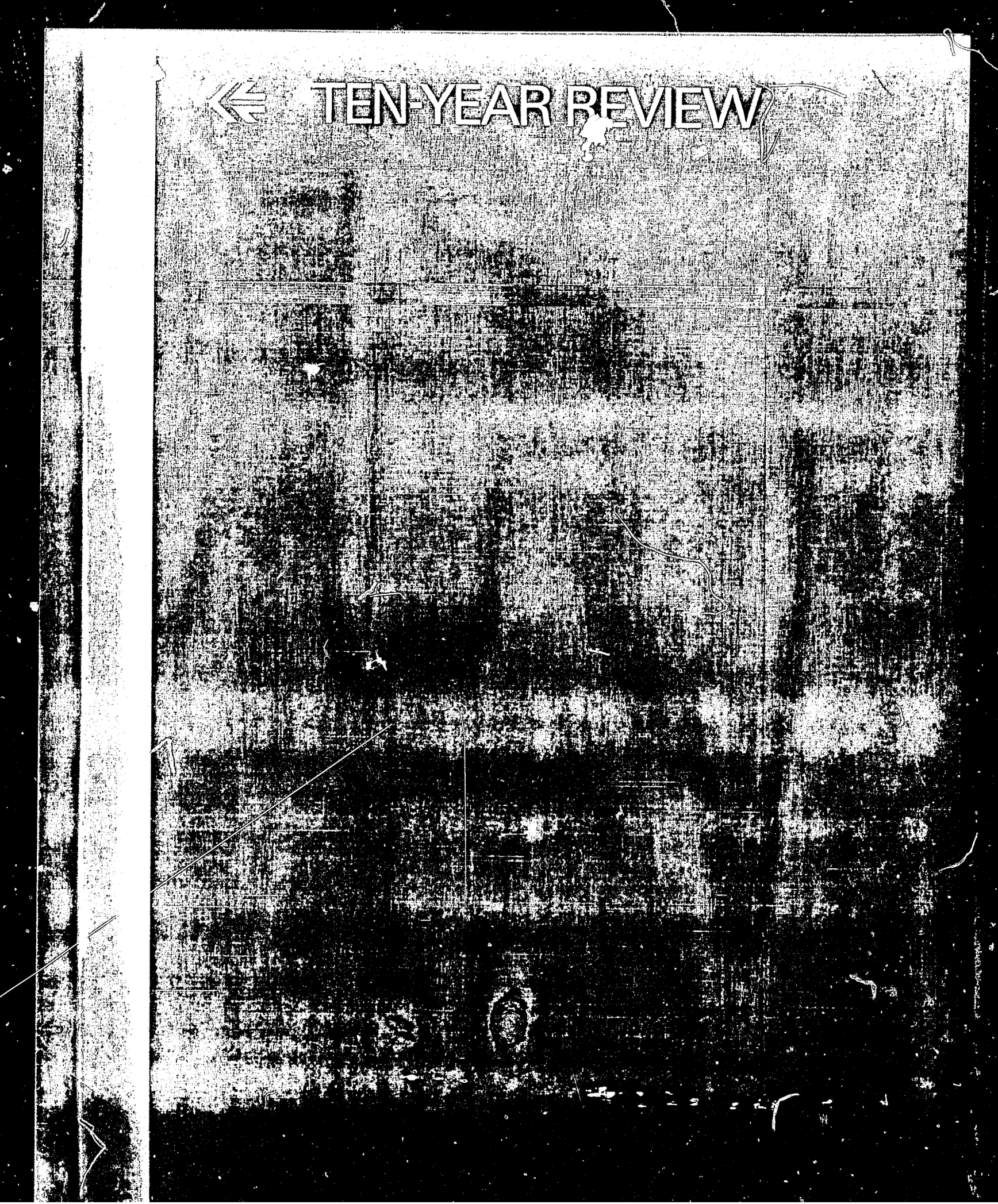
TEN-YEAR REVIEW